SECTION 3 ENVIRONMENT & NATURAL RESOURCES

Conejos County is located in south-central Colorado at the southern end of the San Luis Valley, an area within the Greater Southern Rocky Mountains. The San Luis Valley (Colorado Region 8) includes a six county area consisting of Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache. The valley covers 8,194 square miles with a population of 46,190 persons listed in the 2000 Census . The central portion of the valley consists of a vast, mostly treeless, sagebrush plain at 7,500 elevation. Bordered on the east and west by the heavily forested Sangre De Cristo and San Juan Mountain Ranges the valley has 20 peaks over 14,000 ft. While precipitation on the valley floor averages only 7 inches annually, the Rio Grande and Conejos river systems support an extensive agricultural economy.

The eastern boundary of Conejos County is the Rio Grande River; the western boundary, the continental divide; and the southern boundary, the state of New Mexico. Rectangular in shape, the county has an east and west length of 45 miles, a width of 30 miles, and a total area of 1,274 square miles.

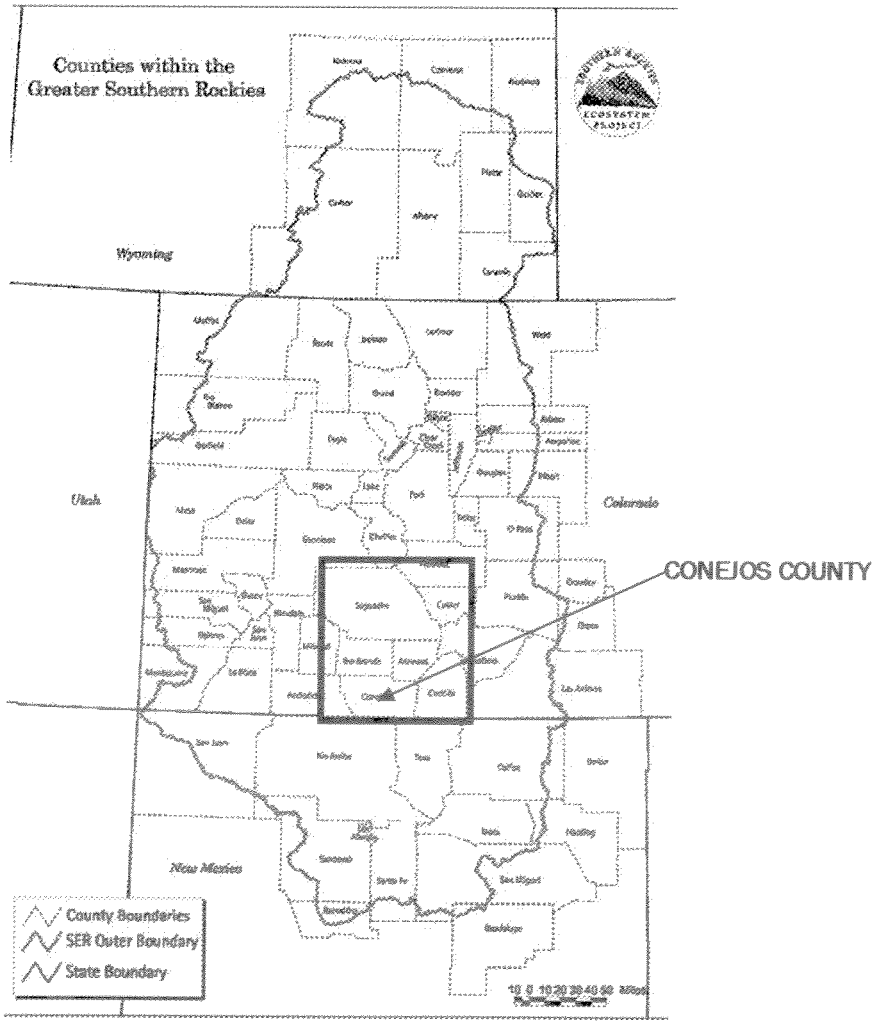


Figure 33 Regional Context for Conejos County

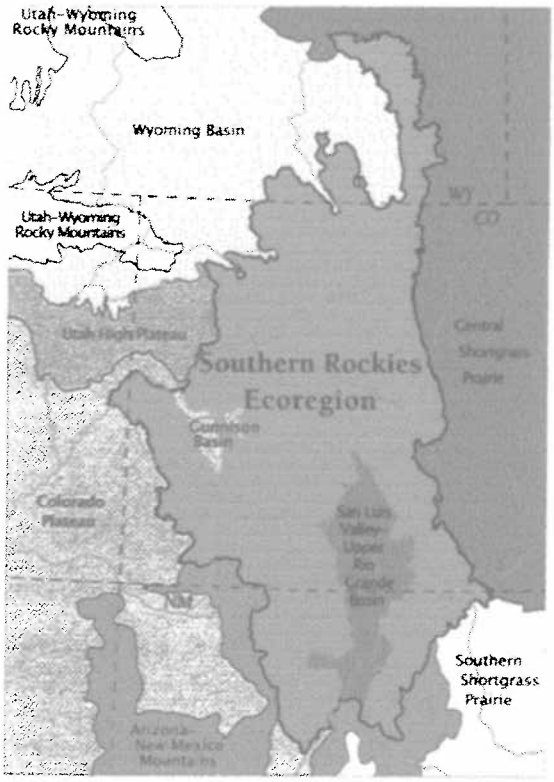


Figure 34 Regional Context for the San Luis Valley & Conejos County

3.1 ECOLOGICAL COMMUNITIES

(1) Desert Shrublands and Grasslands: In the San Luis Valley shrublands are found as high as 7,500-8,000 feet in elevation. Low elevation shrublands can be grouped into three major categories: semidesert, sagebrush, and mountain. Semi desert shrublands exist in areas where precipitation averages less that 10 inches and are dominated by either greasewood or various species of salt-brush. Plant spoecies tend to be low and exposed soil may represent 50% or more of the ground cover.

(2) Low to Mid-Elevation Forests and Woodlands: In the foothills and lower mountains of the valley, (between 6,000 and 8,000 feet) open forests and woodlands form a green canopy that contrasts starkly with the arid lands below. Juniper and Pinyon pine are dominant, though sparse.

(3) Mid to High Elevation Forests: Dense strands of fir blanket the mountain range (between 8,000 and 9,500 feet.) Douglas fir and white fir are dominant species. At the lower elevations, white pine and ponderosa pine prevail. Engleman and blue spruce, as well as aspen and corkbark can be found.

(4) Alpine Tundra, Meadows and Rock Slopes: Landscape of broken forest and montane grasslands, and, higher up, alpine tundra and rocky outcrops. This zone which can be found as low as 10,000 feet, extends up to the highest peaks over 14,000 feet

CONEJOS CLIMATE

Summers are warm or hot in most valleys and much cooler in the mountains. Winters are cold in the mountains. Valleys are colder than the lower slopes of adjacent mountains because of cold air drainage. Precipitation occurs in the mountains throughout the year and a deep snowpack accumulates during winter. Snowmelt usually supplies much more water than can be used for agriculture in the county. In valleys, precipitation in summer falls as showers and some thunderstorms occur. In winter the ground is covered with snow much of the time. Chinook winds, which blow down slope and are warm and dry, often melt and evaporate the snow.

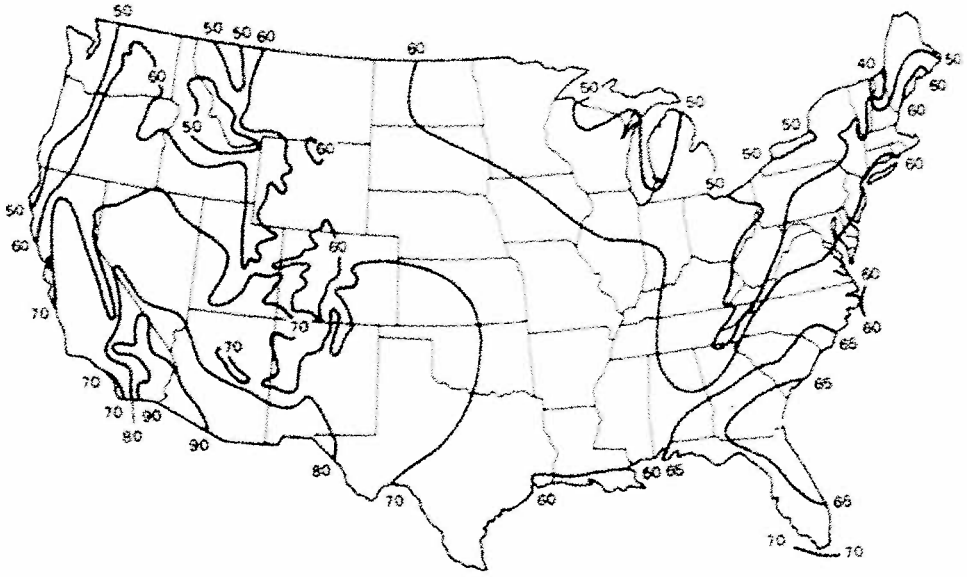
In winter the average temperature is 21.6 degrees F and the average daily minimum temperature is 4 degrees. The lowest temperature on record (-34 degrees) occurred on January 12, 1963. In summer the average temperature is 61.4 degrees and the average daily maximum temperature is 79.6 degrees. The highest recorded temperature (94 degrees) occurred on July 13, 1971.

The total annual precipitation is 5.52 inches. 71 percent usually falls in April through September, which includes the growing season for most crops. The growing season averages 110 days. The heaviest one day rainfall recorded during the period of record was 1.45 inches on August 5, 1954. There are about forty four thunderstorms each year, thirty of which occur in summer.

Average seasonal snowfall in the mountains is 28 inches. The greatest snow depth at any one time during the period of record was eleven inches. On the average, four days out of the year have at least one inch of snow on the ground, but the number of such days varies greatly from year to year.

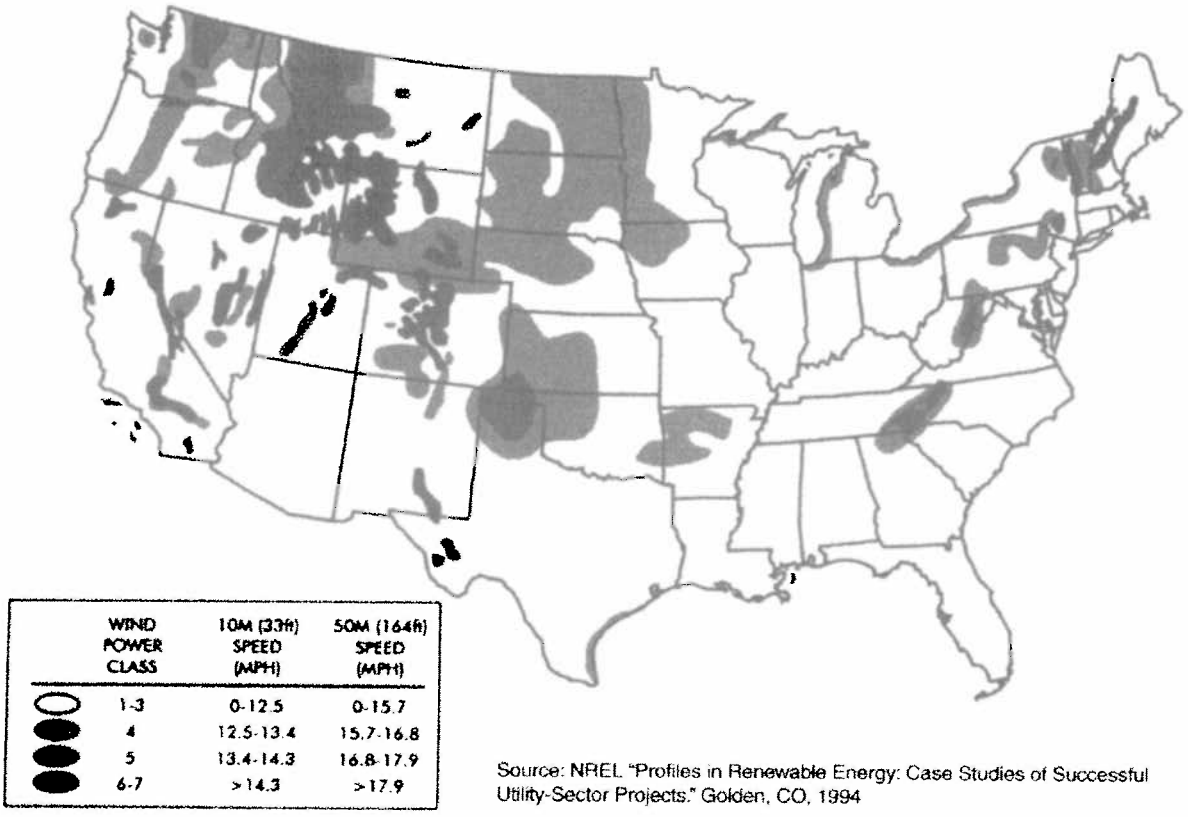
The average relative humidity in mid afternoon in spring is less than 35 percent; during the rest of the year it is about 45 percent. Humidity is higher at night and the average at dawn is about 77 percent. The percentage of possible sunshine is 77 percent in summer and 73 percent in winter. The prevailing wind is from the south-southwest. Average high windspeed is 10.4 miles per hour, in April.

Climatic data in this section were prepared by the National Climatic Center, Asheville, North Carolina.



MEAN ANNUAL PERCENTAGE OF POSSIBLE SOLAR RADIATION

Figure 35 Solar Radiation Map



WIND POWER CLASS	10M (33ft) SPEED (MPH)	50M (164ft) SPEED (MPH)
1-3	0-12.5	0-15.7
4	12.5-13.4	15.7-16.8
5	13.4-14.3	16.8-17.9
6-7	>14.3	>17.9

Source: NREL "Profiles in Renewable Energy: Case Studies of Successful Utility-Sector Projects." Golden, CO, 1994

Figure 36 Wind Energy Map of the United States

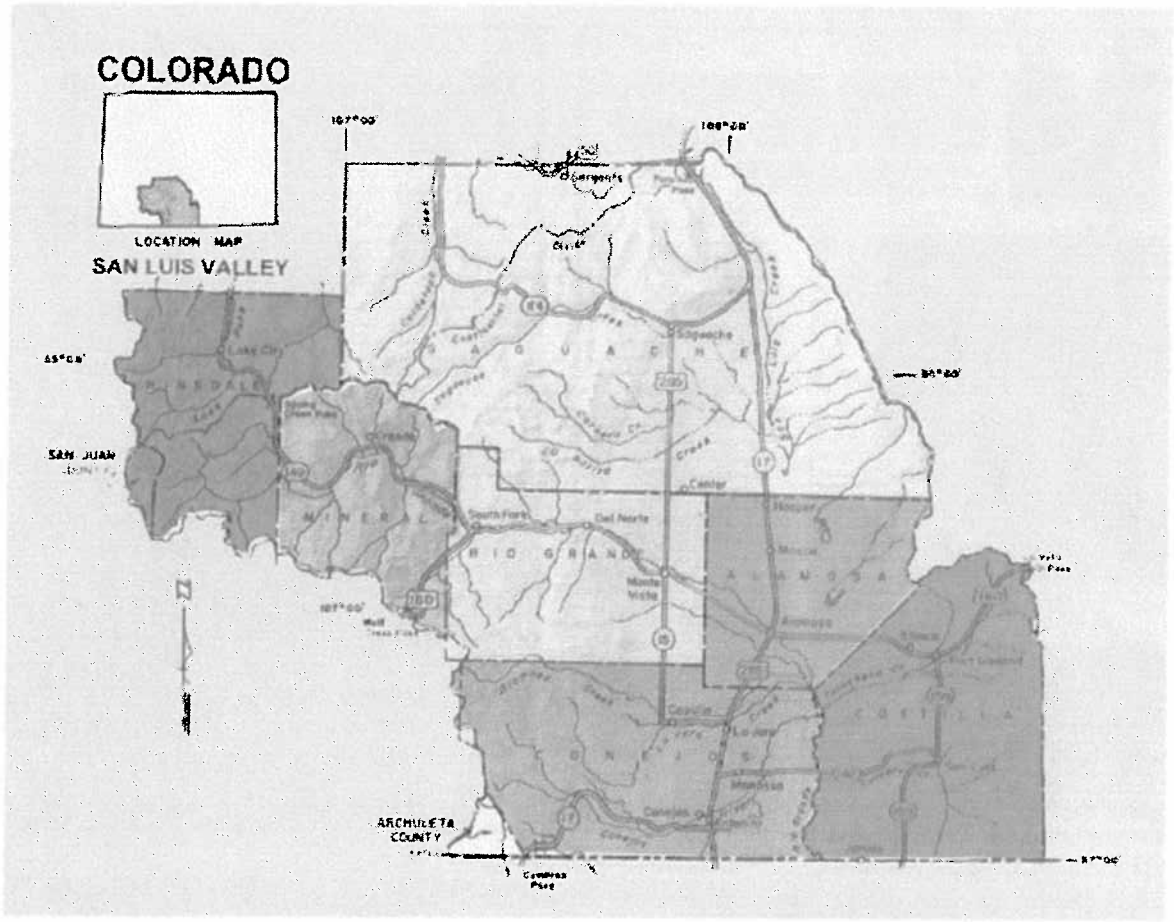


Figure 37 Map of the San Luis Valley

The primary purpose for including environmental considerations in the Comprehensive Plan is to identify the most important aspects of the natural and manmade environments, their interrelationships, and the major problems and/or opportunities they represent for community development. As a consequence, it is essential that the Comprehensive Plan access those environmental features which should be recognized so as to minimize hazards to life and property, to minimize unwise use of or damage to our natural resources.

3.3 GEOLOGIC SETTING

Conejos County is comprised of three separate but related physiographic subdivisions: The Alamosa Basin (San Luis Valley Floor), the San Luis Hills, and the San Juan Volcanic Field (which forms the San Juan Mountains). Figure 37 gives the approximate boundaries of these physiographic subdivisions in Conejos County.

The Alamosa Basin forms the eastern half of Conejos County (see Figure 37). The principal characteristics of the Alamosa Basin in Conejos County are its featureless floor and the recency of the deposits in the basin. Streams entering the Alamosa Basin from the west originate in the San Juan Mountains. and have developed broad and gently sloping alluvial fans. Consequen ly, the Conejos County portion of the Alamosa Basin is essentially an area of deposition underlain by modern alluvial fan deposits.

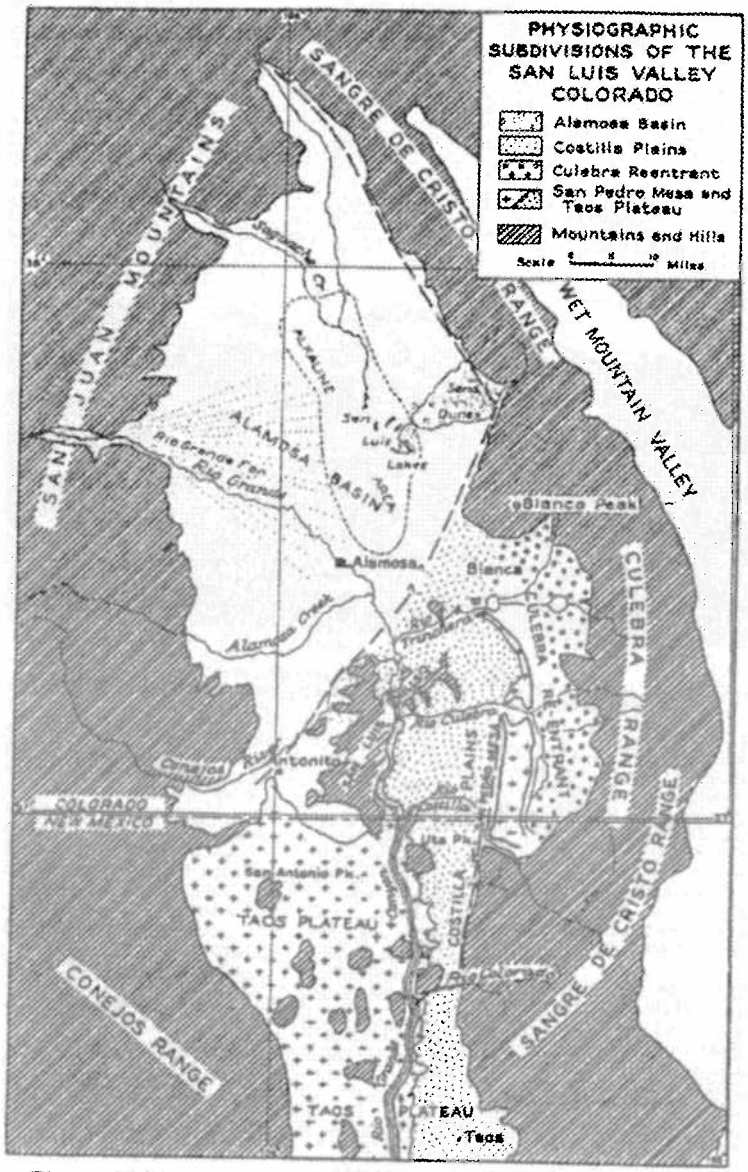


Figure 38 Physiographic Subdivisions of the San Luis Valley

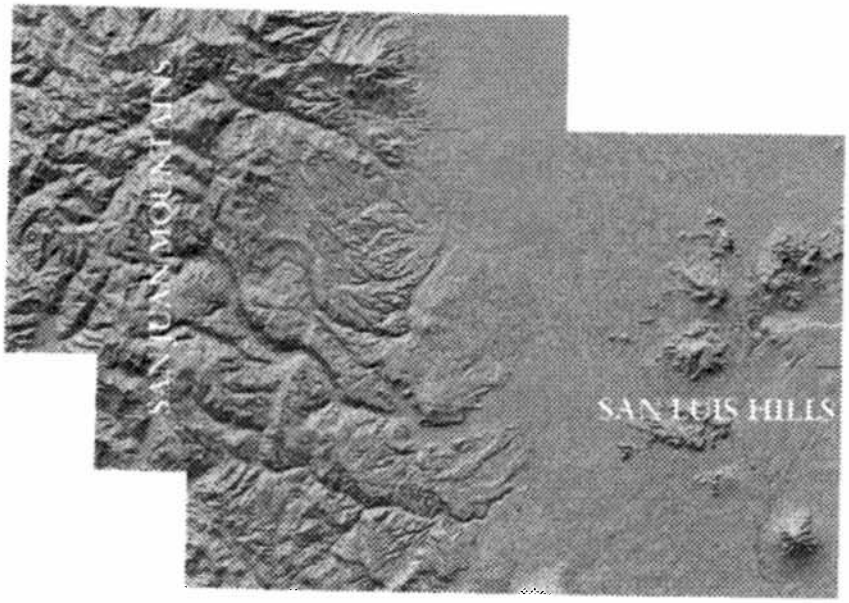


Figure 39 Topographic Model of Conejos County

3.3.1 The San Luis Hills

The second physiographic subdivision of Conejos County is the San Luis Hills. The physiographic subdivision constitutes a rugged mass of hills and tilted mesas 500 to 1,000 feet high and extend from near the town of Antonito to approximately 5 miles east of Sanford. The San Luis Hills consist of volcanic rocks of the Tertiary Conejos Formation intruded by Late Oligocene stocks, dated at 27.7 million years. After a period of faulting which dissected the San Luis Hills between Conejos and Costilla Counties (roughly approximately the course of the Rio Grande), the San Luis Hills were surrounded by basalt flows belonging to the Hinsdale Series.

3.3.2 The San Juan Mountains

The western half of Conejos County is part of the San Juan volcanic field commonly referred to as the San Juan Mountains. The San Juan volcanic field covers about 25,000 Km in southwestern Colorado and northern New Mexico (see Figure 1). It is the largest remnant of a once nearly continuous volcanic field that extended over much of the southern Rocky Mountains in Oligocene and later time. According to Lipman (1975) the general volcanic sequence for the San Juan Mountains was relatively simple:

> "...initial intermediate-composition lavas and breccias, followed closely in time by more silicic ash-flow tuffs, and ending with a compositionally bimodal association of basalt and rhyolite."

The San Juan Mountains of Conejos County consist almost entirely of volcanic rocks and related shallow intrusive rocks of middle or late-Tertiary age. Although no detailed studies have been made of the entire San Juan mountain region in Conejos County, several investigators have studied the area around the Platoro caldera in the northwestern part of the County. According to Bird (1973), the major rock units in the southern portion of the Platoro caldera are the Conejos Formation, the Treasure Mountain Tuff La Jara Canyon, Ojito Creek and Ra Jadero Members, the Summitville Andesite, and the Hirisdale Formation.

CONEJOS GEOLOGY

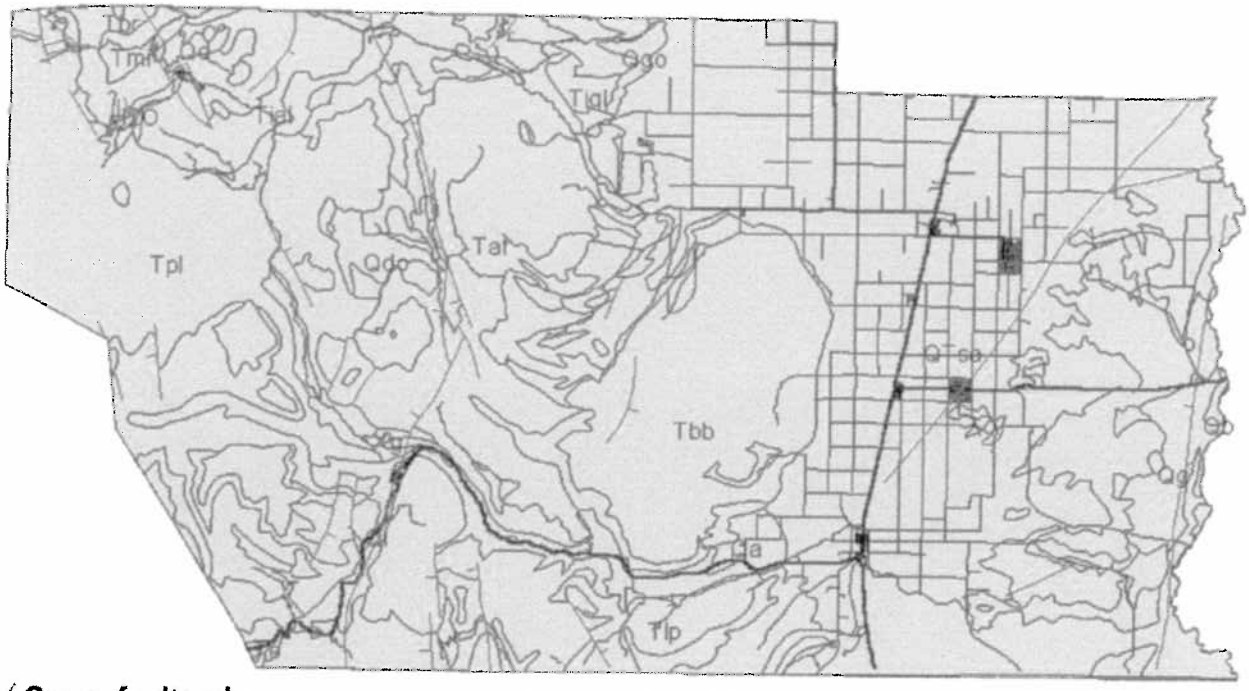


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Figure 40 Geologic Map of Conejos County

In general, the geologic structure of Conejos County is quite complex, Figure 39 shows the systems of faulting in Conejos County at a relatively small scale.

N
W E
S

Tial: Intra-Ash Flow Andesitic Lavas
Tbr: Rhyolitic Intrusive Rocks and Flows
Tmi: Middle Tertiary Intrusive Rocks
Taf: Ash Flow Tuff
Tpl: Pre-Ash-Flow Andesitic Lavas, Breccias, Tuffs, and Conglomerates
Tiql: Intra-Ash Flow Andesitic Lavas
Tmi: Middle Tertiary Intrusive Rocks
Tlp: Los Pinos Formation
Tbb: Basalt Flows and Associated Tuff, Breccia, and Conglomerate
Qtsa: Unclassified Surficial Deposits and Underlying Alamosa Formation
Qgo: Older Gravels and Alluviums (Pre-Bull Lake Age)
Ql: Landslide Deposits
Ql: Glacial Drift (Pinedale and Bull Lake Glaciations)
Qd: Glacial Drift (Pinedale and Bull Lake Glaciations)
Qa: Modern Alluvium
Xg: Granitic Rocks
Te: Prevolcanic Arkosic and Bouldary Gravel
KJdw: Dakota, Burro Canyon, Morrison, and Wanakah Formations
Km: Mancos Shale

3.4 SOILS

Conejos County has fifty seven soil types, the following two groupings are the most common types:

1. Soils dominantly on flood plains, fans, and terraces, are nearly level to moderately steep, somewhat excessively drained to poorly drained. Deep to shallow soils occur throughout the Conejos County area except in the extreme western part. There are eight map units in this group of soils. They make up eighty four percent of the area.

2. Soils on hills, mountains, mesas, and intermingled fans and terraces are gently slopping to very steep, well drained with deep to shallow soils. These soils occur mainly in the extreme western edge of Conejos County and in a small area on the eastern edge of the county. There are three map units in this group of soils. They make up about 16 percent of the Conejos County area.

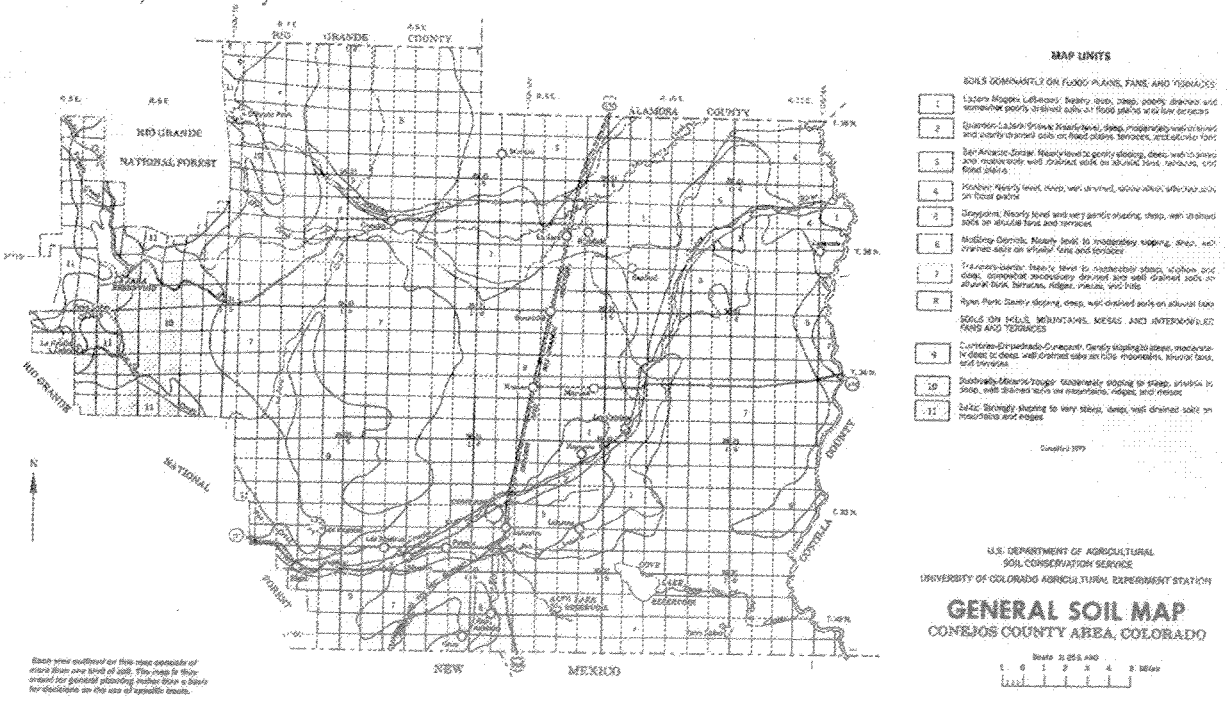


Figure 41 General Soil Map of Conejos County

A potential environmental constraint to future land use in Conejos County is the soil. Different soil types pose different problems to development such as soil instability, septic tank limitations, expansive or clay soils, etc. Consequently, knowledge of soils information is imperative in order to make informed decisions regarding future land use.

A field survey of soil types in Conejos County was completed by the Agricultural Soil Conservation Service in 1977. Copies of the soil maps and general analysis of each type are available. The water table in the valley portion of Conejos County is high and poses problems to septic tanks. Clay formations are also evident in the county which effect leaching fields because of their low permeability factor.

3.4.1 SLOPE ANALYSIS

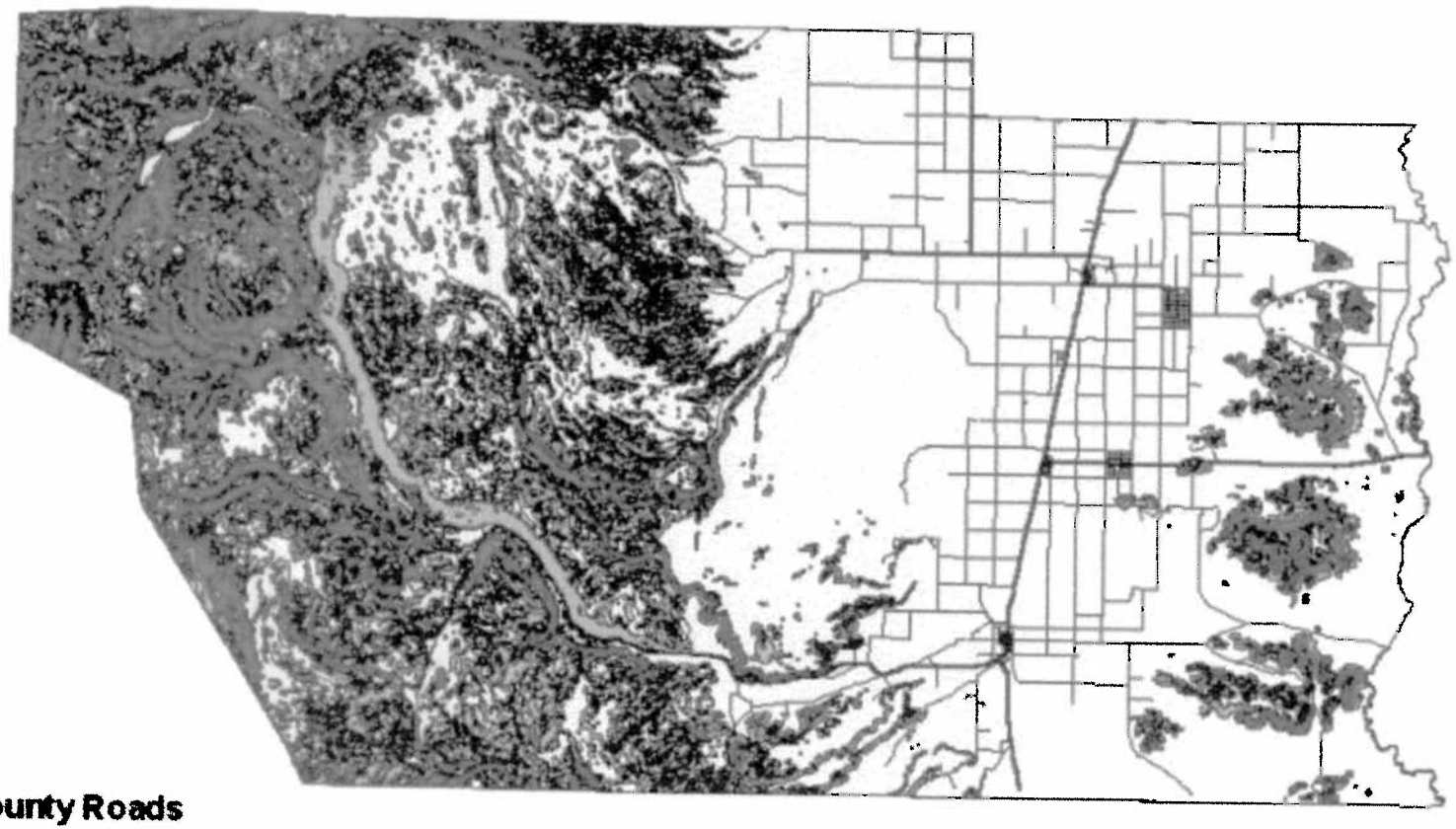
The majority of the sloped land in Conejos County is located in the western part of the county along the San Juan Mountain Range. Slope is a major factor which must be considered in determining the future use of land. As slope increases, land becomes less suitable for development because increasing slope frequently means problems for access and road maintenance, etc. Therefore, the greater the slope, the greater the potential for problems in using land. Slopes in excess of eight percent is a principle base constraint within Conejos County. The slope analysis classifies slopes into four categories:

1. Slopes between 0% and 8%. Most road design standards and building codes allow construction within this range.
2. Slopes between 9% and 15%. Some mitigation may be necessary, with possible structural reinforcement along with undesired cut and fill activity.
3. Slopes between 16% and 33%. Significant mitigation is necessary, with need to evaluate proposed construction on a case-by-case basis.
4. Slopes greater than 33%. Any mitigation not recommended, due to potential risk of haz-

3.4.2 GEOLOGIC HAZARDS

In addition to soils, another related environmental constraint to future land use in Conejos County is geologic hazards. According to the Colorado Geological Survey, "geologic hazard means a geologic phenomenon which is so adverse to past, current, or foreseeable construction or land use as to constitute a significant hazard to public health and safety or to property." It includes nine types of hazards, five of which are relevant to Conejos County including avalanches, landslides, rockfalls, mudflows and debris fans, and unstable or potentially unstable slopes.

CONEJOS COUNTY



SLOPE ANALYSIS

MAP 6 Slope Map of Conejos County

3.5 Mineral Resources

The General Assembly of Colorado states in C.R.S. 34-1-301 that commercial mineral deposits are essential to the state's economy. These deposits should be extracted according to a rational plan that avoids waste of the minerals and causes the least practicable disruption of the ecology and quality of life of the citizens of the areas affected.

The mineral extraction plan facilitates preservation and protection of the county's commercial mineral deposits from encroachment by incompatible land use that would limit the options of future decision makers in considering the demand for aggregate resources. At the same time, applicants for an extractive use in an aggregate resource area must address all environmental and compatibility issues to be assured approval. Nothing in the designation of aggregate resource areas is intended to preclude approval of applications for extractive uses outside the designated areas if all county requirements are met.

Beyond protecting areas of known mineral resources for eventual extraction, Conejos County is interested in reclamation of sites after the resources are removed. The State Mined Land Reclamation Board has developed standards and procedures for reclamation plans. Within its authority, the county will work with mining permit applicants to identify appropriate uses and landscape forms for the reclamation plan.

Preferred uses for mineral extraction consistent with the adopted land use plan and provide quality recreation, open space and wildlife habitat opportunities. In defining "commercial mineral deposits," the following factors are considered:

1. Aggregate resources as mapped by Colorado Geological Survey.
2. Wetlands and critical riparian areas and wildlife habitat.
3. Size of the potential area.
4. Existing development that effectively precludes extraction.

Other site-specific factors rendering extraction inappropriate in light of the countervailing factors listed in C.R.S. 34-1-304(1), include the quality of life of the residents in and around areas which contain commercial mineral deposits and the ability to reclaim the area.

State statutes emphasize protection of mineral resources and require extensive mapping by the Colorado Geological Survey. Important mineral resources exist in Conejos County that have not yet been inventoried or mapped.

3.6 Air Quality

In general, the air quality of Conejos County is considered good. Most of the undesirable particulate matter originates from the mineral processing facilities near Antonito. Gravel pits and hot-mix plants are another source of dust and air pollution. Forest fires in the vicinity have resulted in smoke drifting into the San Luis Valley settling for several days reducing visibility and creating potential health hazards for people with respiratory illnesses or other diseases. There are no regulatory mechanisms or standards in the valley for dealing with air quality. The main source of information and standards in Colorado that apply to all counties are the Colorado Air Pollution Prevention and Control Act. The Air Quality Control Division is responsible for regulating air quality.

3.6.1 Noise, Glare and Odor Conditions

Noise, glare and odor conditions are an important component of the health, safety, and quality of life of Conejos County residents. As new development occurs, residents should be protected from unreasonable changes in conditions beyond the property boundaries of the development site. Performance standards will define permissible levels of noise, glare and odors which apply to all zoning districts and all use classifications.

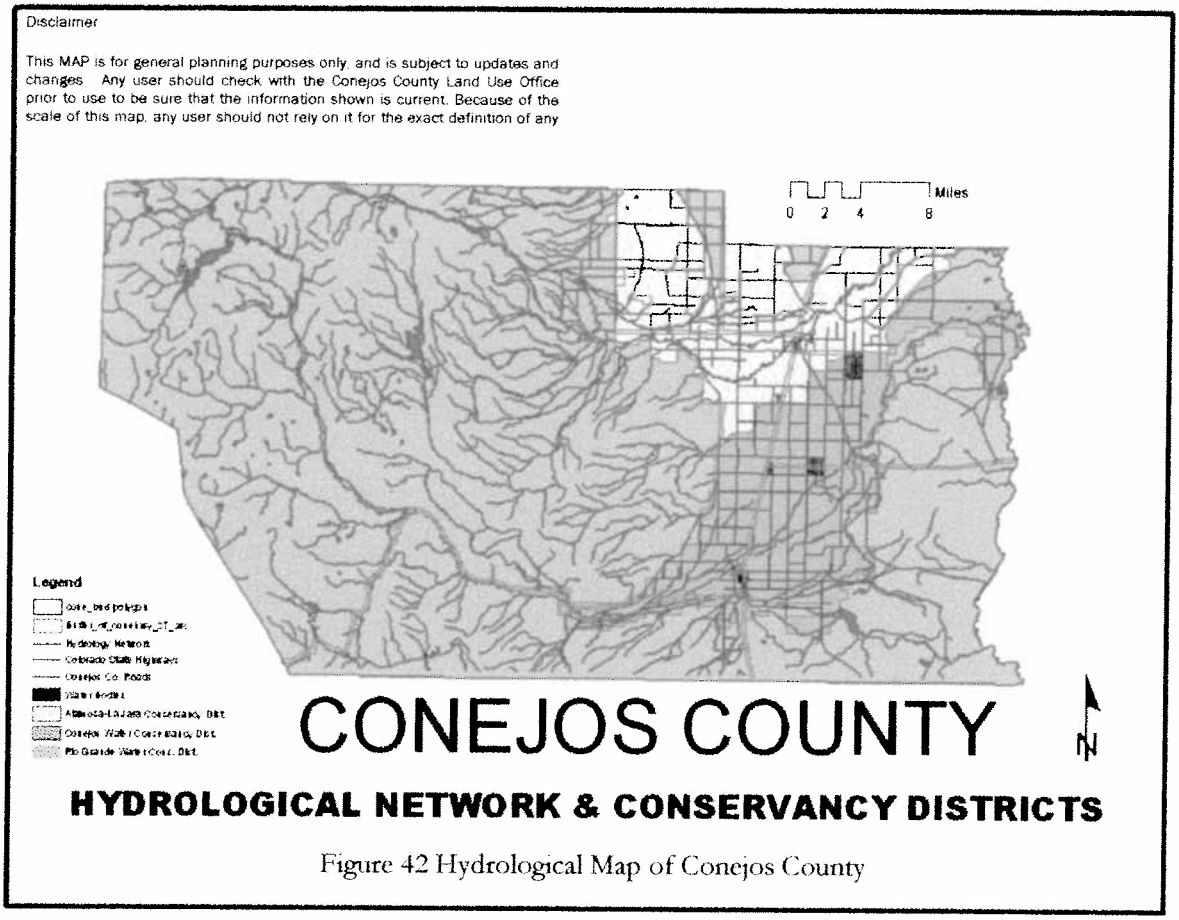


Figure 42 Hydrological Map of Conejos County

3.7 WATER RESOURCES

Water is crucial to the survival of life and the agricultural economy. Aquatic and riparian ecosystems provide water and support a diverse habitat for the region's native species. Water resources are identified by drainage basins, reservoirs, streams, and the ditches, or acequias. The hydrological regime for Conejos County is composed of a network of streams that originate in the San Juan Mountain Range and flow eastward towards the Rio Grande.

Each drainage basin is within a water conservancy district. The two water conservancy districts are the Alamosa-La Jara, and the Conejos Districts located in Division 3, District 21 . Both of these districts also lie within the Rio Grande Water Conservancy District, of the San Luis Valley.

The Conejos, Alamosa, La Jara Creek, and San Antonio Rivers are the main water courses. Each of these rivers is fed by snow melt, seepages, and springs. A network of ditches divert off of the rivers forming the irrigation channels for distribution to the agricultural production. Eventually, the main water courses, or rivers, converge at the Rio Grande. The Rio San Antonio near the Colorado/New Mexico State line consists of 33 ditches while the Conejos River main channel consists of 74 ditches with the north branch of 17 ditches, for a total of 91 ditches. La Jara Creek main channel consists of 36 ditches with the Hot Creek branch consisting of 5 ditches. At the upper end of the county the Alamosa River branches out into 51 ditches. These figures are based on the information available in 1975 by the Colorado Office of the State Engineer. Since then, there have been numerous abandonments.

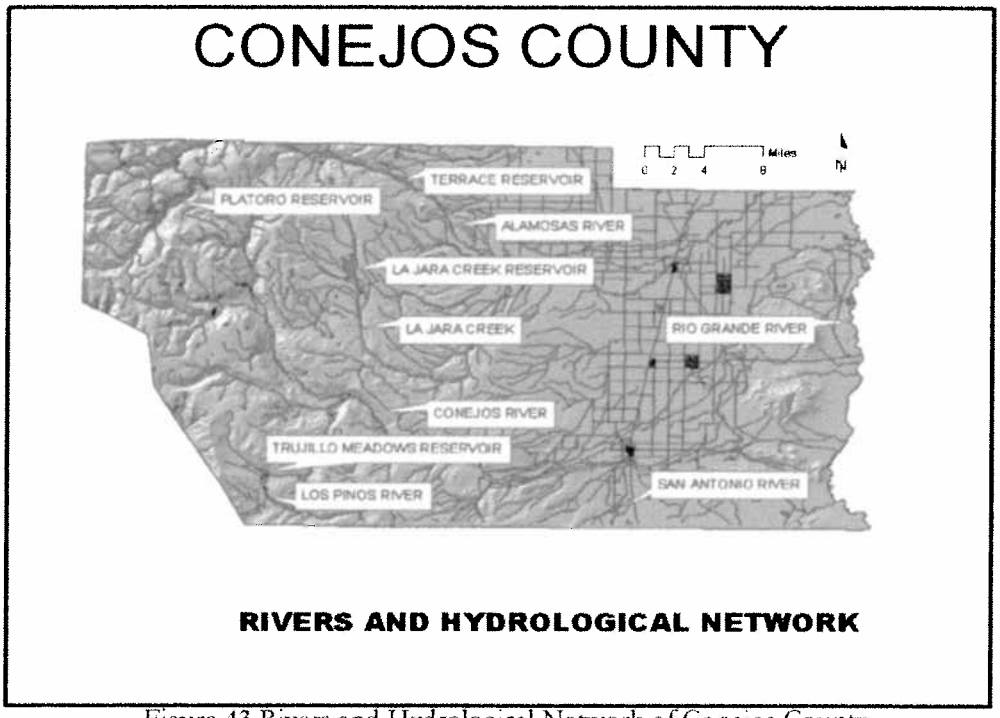


Figure 43 Rivers and Hydrological Network of Conejos County

Reservoirs were been built in an effort to store flood-waters and for the irrigation systems. Completed in 1951, Platoro Reservoir, located at 10,027.5 feet in elevation. The Platoro Reservoir provides an impoundment of 53,506 acre-feet of water providing supplemental irrigation to 73,890 acres. The Terrace Reservoir built on the Alamosa River in 1911 has a smaller capacity of 13,000 acre-feet with a drainage basin area of 116.5 square miles. The La Jara Reservoir built in 1908 has a storage capacity of 14,052 acre-feet and a drainage area of 25,600 acres. All three reservoirs have Emergency Preparedness Plans with floodplain delineations.

Water quality is fundamentally related to land use. In order to establish policies for water resources protection local governments must have the authority to regulate private lands. Watershed protection on public lands must be primarily the responsibility of federal and state agencies. Land use regulation for water quality protection is most effective using a watershed approach, which takes into account potential water quality impacts including:

- Erosion Control
- Management of stormwater runoff
- Limitations of disturbance on steep slopes
- Hazardous material management
- Wastewater system standards
- Watershed Districts or sensitive area overlay district
- Water body buffer systems

Figure 44 San Antonio River

3.7.1 Water Quality and Quantity

Water quality is essential to the health, welfare and quality of life of Conejos County residents. Local, state and federal standards exist for water quality. The development review process will insure compliance with these standards. Polluted runoff has the potential to impact both surface and groundwater supplies. The State of Colorado has exclusive authority to set water quality standards for streams and groundwater, and to regulate the discharge of point source discharges. Existing county requirements for erosion and drainage control will be augmented in the Land Use Code. Applicants must show they have obtained a Colorado Stormwater permit for construction activities, industrial uses, and mining activities All are required to meet thresholds under State law. Colorado Stormwater permits require applicants to identify and carry out appropriate best management practices to minimize polluted runoff from their sites.

Because of their relationship to public health and safety, drinking water sources should be provided the highest achievable levels of environmental protection. The county will support any municipal authority wishing to maintain the quality of domestic water supplies. The Land Use Code will provide regulations concerning the discharge of stormwater into a water supply reservoir. Water quality management plans are required to address water chemistry, as well as sediment transport and control.

In addition, uses with the potential to negatively affect groundwater levels, such as mining operations, will be required to provide evidence acceptable to the State's Division of Water Resources that impacts will be acceptable. Conejos County is also very interested in maintaining the historic amount of water - both for agricultural and other uses - in the basins serving the County.

3.7.2 Wetlands

Within Conejos County, priority has been given to inventorying wetlands. These environmental resources are among the most environmentally important ecosystems in the area and also the most vulnerable to development pressures. Ecological consultants from The Colorado Natural Heritage Center inventoried and mapped wetland resources in Conejos County and recommended strategies for protection. The resulting maps and report, *Biological Inventory of Rio Grande and Conejos Counties, Colorado Volume II: A Natural Heritage Inventory and Assessment of Wetlands and Riparian Areas in Rio Grande and Conejos Counties,* are available in the land use.

The classification system used in the wetlands mapping incorporates both the Clean Water Act (CWA) and U.S. Fish and Wildlife (FWS) wetland definitions, as well as a local classification system designed to quantify the importance and function of each wetland.

CWA wetlands are defined by the U.S. Army Corps of Engineers as those areas "inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. These wetlands generally include swamps, marshes, bogs and similar areas". CWA wetlands are regulated by the Clean Water Act. Development which might result in disturbance of wetlands activates a permit process through the U.S. Corps of Engineers.

Figure 45 Wetlands Near Manassa

The U.S. Fish and Wildlife Service (FWS) defines wetlands as "land transitions between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water". FWS wetlands must have one or more of the following attributes:

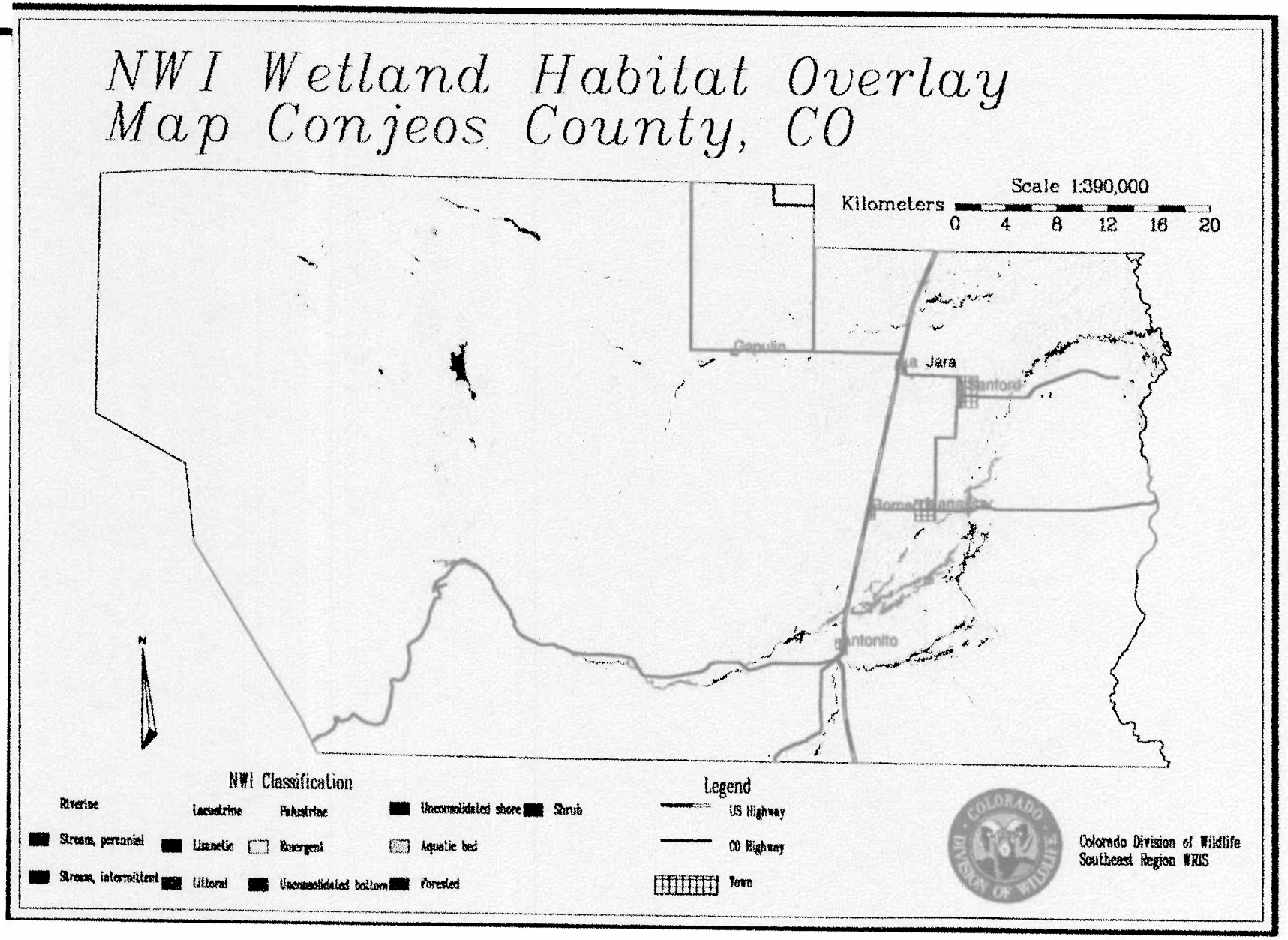
1. At least periodically, the land supports predominantly hydrophytes.
2. The substrate is predominantly undrained hydric soil.
3. The substrate is non-soil and is saturated with water or covered by shallow water at some time dur ing the growing season of each year.

The FWS definition was used in addition to the CWA definition to include riparian areas, salt flats, vernal pools, and farmed and other disturbed wetlands in the survey. The wetlands study incorporates three factors in evaluating site plans:

- wetland importance,
- wetland quality and
- wetland sensitivity.

"Importance" rates wetland functionality in terms of sediment trapping and nutrient retention, flood storage, bank stability, food chain support, wildlife habitat, and recreation. "Quality" ranks disturbance state and restoration potential. "Sensitivity" relates to sensitivity to human use. Most of the wetlands receiving the lowest rating were gravel quarries, irrigation ditches, or plowed vernal pools. The principal method of protecting wetlands and riparian areas is to require a Wetland Mitigation Plan for any development which impacts an identified wetland area. Requirements and performance standards for Wetland Mitigation Plans will be included in the Land Use Code. They will address the possibility of off-site mitigation of wetland loss through replacement or restoration of degraded wetlands.

Figure 46 Wetlands Near Los Sauses



MAP 7 Conejos County Wetlands

3.8 ECOSYSTEMS AND HABITAT CONSERVATION

Important Wildlife Habitat

For many years, Conejos County has endeavored to protect wildlife through the development review process. New development applications have been reviewed by the Division of Wildlife and project design has been used to mitigate negative impact on known species using the site. This approach has had many successes but is limited in its ability to deal with cumulative impacts of development, both beyond the project site and over time. The Master Plan recommends two changes to enhance wildlife protection:

1. The new pattern of clustered development, using the Rural Conservation Development model, is expected to significantly reduce the area of habitat disturbance from development.

2. Mapping high priority habitat, including corridors where applicable, will assist the County in

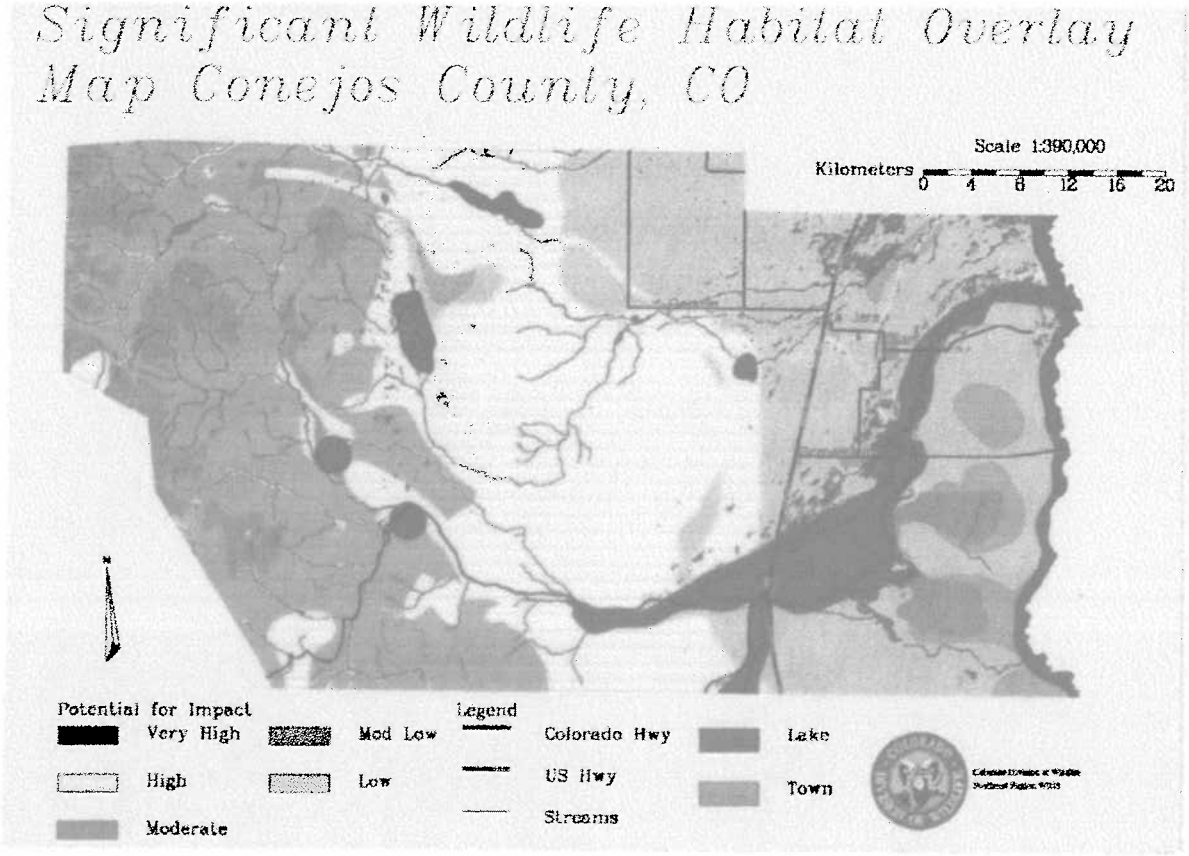


Figure 47 Map of Significant Wildlife

Setting priorities for habitat conservation requires making decisions about which types of habitat are most important. Conejos County in cooperation with the Colorado Division of Wildlife, developed maps of important habitat. Four criteria have been selected as the basis for determining wildlife criteria :

1. ***Rare vegetation types.*** Rather than attempting to design conservation plans for the more than 400 species of vertebrates in Conejos County, important habitat maps focus on the species' associated vegetation communities. Highest priority goes to protecting vegetative communities that are rare and stand in the path of development.

2. ***Areas known to contain rare and threatened species.*** There are areas of the County where populations of rare and imperiled species are known to live. Loss of these areas of habitat will threaten the existence of these species within the county, the region or even globally. The Colorado Natural Heritage Program has conducted an inventory of rare plants and animals in the county. This inventory provides maps of conservation sites ranked according to urgency of protection.

3. ***Areas supporting an unusually large number of species.*** Some areas of Conejos County support many different species of wildlife or areas of high species diversity. Protecting these areas will achieve greater conservation than areas of low diversity.

4. ***Areas providing habitat for species of importance to the people of Conejos County.*** This criteria includes areas that are moderately to highly impacted by development and known migration corridors. The following specific areas are included:

- Pronghorn concentration areas
- Mule deer winter concentration areas
- Elk severe winter range
- Duck winter range
- Bighorn sheep lambing areas
- Mule deer migration corridors
- Elk migration corridors

3.9 HUMAN-WILDLIFE INTERACTION

An important component of identifying habitat and creating wildlife management for growing areas is human/wildlife interactions. The human/wildlife interaction is defined as an area or zone where structures and other human development meet or intermingle with undeveloped wild land. Simply as the human/wildlife interface continues to be developed, encounters with wildlife occupying those areas are increasing. Problems include damage by human pets, destruction of vegetation and property by feeding animals, concerns about disease transmission, and increasing calls by the community for the removal or destruction of wildlife. For development proposals on the urban-wildlife interface, management plans should specifically address these concerns and reduce detrimental human-wildlife interaction.

3.9.1 Colorado Natural Heritage Program

The Colorado Natural Heritage Program has mapped plant and animal communities of State and National importance within Conejos County. This mapping project included preliminary identification of sites from existing data and interpretation from aerial photographs. The information from this program includes recommendations for resource management/stewardship plans to protect resources of the area. The data from the Heritage Program will be used to identify important natural resources on and adjacent to development sites and to assist in development design to best protect the wildlife and their habitat.

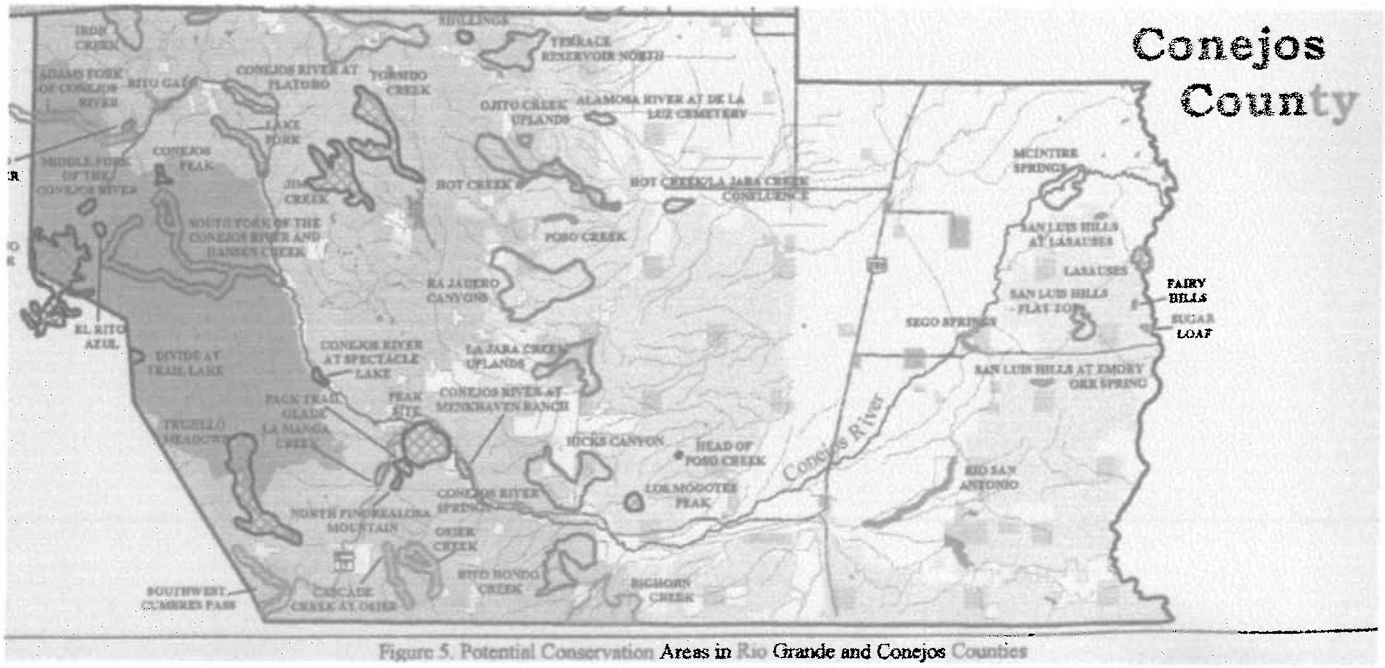


Figure 5. Potential Conservation Areas in Rio Grande and Conejos Counties

Figure 48 Map of Potential Conservation Zones

3.9.2 Rare and Endangered Species

The development review process will support State and Federal standards and regulations regarding rare and endangered species, including vegetative communities. The data base established through the Colorado Natural Heritage Program of Wildlife and Plant Communities of State and National importance will be the initial indication of the existence of a protected species (see Section on Ecosystems and Habitat Conservation). All new development projects will be referred to the Colorado Division of Wildlife at the initial stage of application. Any subsequent indication that a protected species is present on the site will require further investigation and referral to the U.S. Fish and Wildlife Service. If a protected species is present on the site, a mitigation plan will be required.

3. 10 Hazard Areas

Hazard areas, or areas prone to natural disturbance occur throughout Conejos County. These natural disturbances include wildfire, flooding, landslide, rockfall, mud flow and debris fans, unstable or potentially unstable slopes, seismic zones, ground subsidence and expansive soils and rock.

The classification of hazard areas generally depends on the consequences of the natural disturbance upon life and property. "Severe" hazard areas are defined as places where the natural disturbance pose a significant threat to health, life, limb or property. "Moderate" hazard areas occur where there is not a significant threat to life or limb, but where there can be intolerable damage to property. In addition, there are areas where natural conditions may cause significant harm to health or property but where mitigation efforts can successfully eliminate the potential impact. These areas are classified as "Constraint" areas. The following definitions are used in the Master Plan and the Land Use Code:

- ***Severe Hazard Areas:*** Flood Way (FW) Zoning Districts as adopted on official zoning maps, are areas classified on the official Geologic Hazards Maps with slopes greater than 30 percent. This hazard poses potential threats to the life and property of landowners choosing to build in floodplains. As a consequence, development in floodplains should be discouraged unless proven mitigation procedures are followed.

- ***Moderate Hazard Areas:*** Flood Fringe (FF) Zoning Districts as adopted on official zoning maps are areas classified on the official Geologic Hazards Maps with slopes 20 - 30 percent, dam breach areas.

- ***Constraint Areas:*** Areas of expansive soil and rock, radon areas.

Many of the hazard areas in Conejos County have been mapped and the severity of the potential natural disturbance classified. In areas where hazard mapping is not complete and for hazard types which have not been mapped, such as dam breach areas, the applicant must provide additional information The applicant may be also required to coordinate with the State Geologist, State Engineer or other agencies when a hazard area is located on the project site.

With the exception of the 100-Year Flood Maps prepared under direction of the Colorado Water Conservation Board, the hazard area mapping currently adopted by Conejos County, It is not sufficient to delineate precise hazard areas at the site level. Where the adopted mapping indicates that a hazard or constraint area exists on a site under consideration for development, the applicant is responsible for providing sufficient information as part of the development application to locate and classify the extent of the hazard area on the property and to demonstrate that the potential natural disturbance for that area has been successfully avoided or mitigated.

Disclaimer

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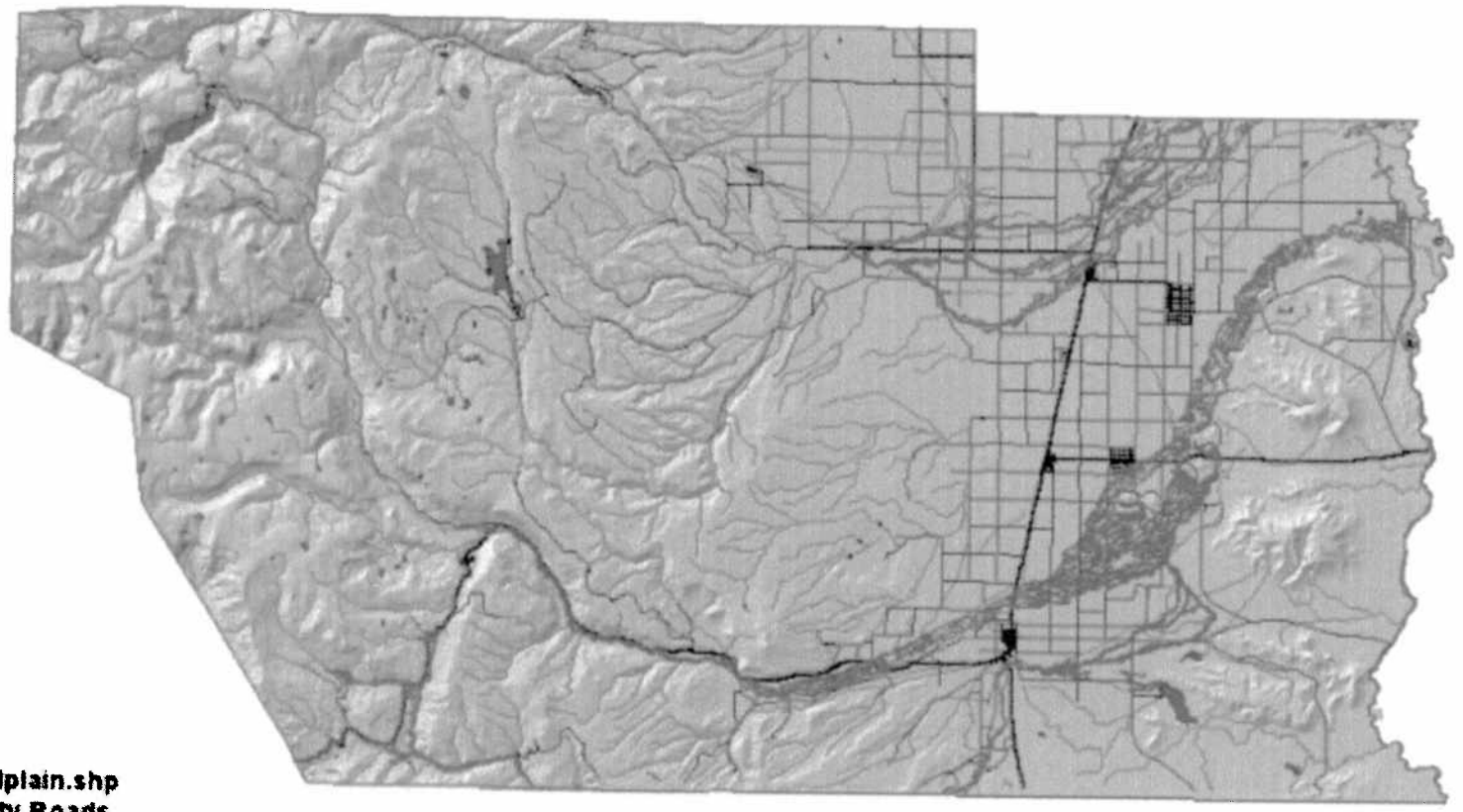

CONEJOS COUNTY FLOODPLAIN MAPS

MAP 8 Conejos County Floodplains

3.11 Wildfire Hazard Mitigation Areas

The potential for loss of life and property due to wildfire has increased dramatically in the San Luis Valley, as more and more residents choose to live in the foothill and mountain areas.

The wildland/urban interface is defined as an area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Conejos County has an estimated 99,242 acres of wildland / urban interface (SLVGIS/GPS Authority). Several subdivisions in this area have a high fire-loss potential.

Colorado State statutes designate the county sheriff as "fire warden" on state and private lands. Therefore Conejos County is responsible for wildfire suppression and associated costs. Large wildfires often cause the County to rely on contingency funds.

Wildfire hazard areas have been mapped in Conejos County. However, increased public concern and rising costs have led the County to adopt a more comprehensive approach to wildfire hazards than for other hazard types. Although certain areas can be identified with a high risk for wildfire, wildfire mitigation is important even in "low-hazard" areas. For example, high winds during wildfire episodes can carry embers for long distances and ultimately threaten lives and property.

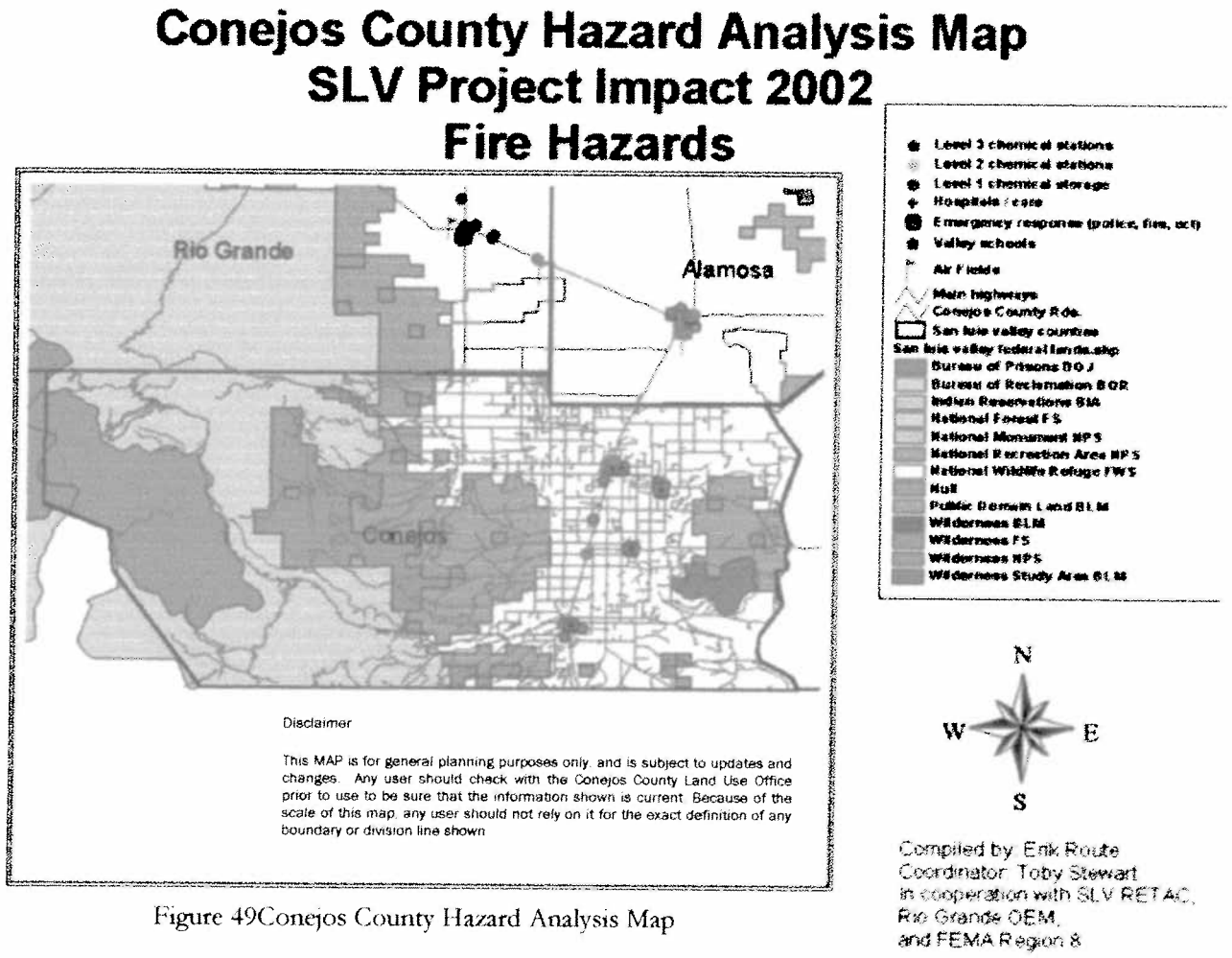

Figure 49Conejos County Hazard Analysis Map

CONEJOS COUNTY FIRE PLAN

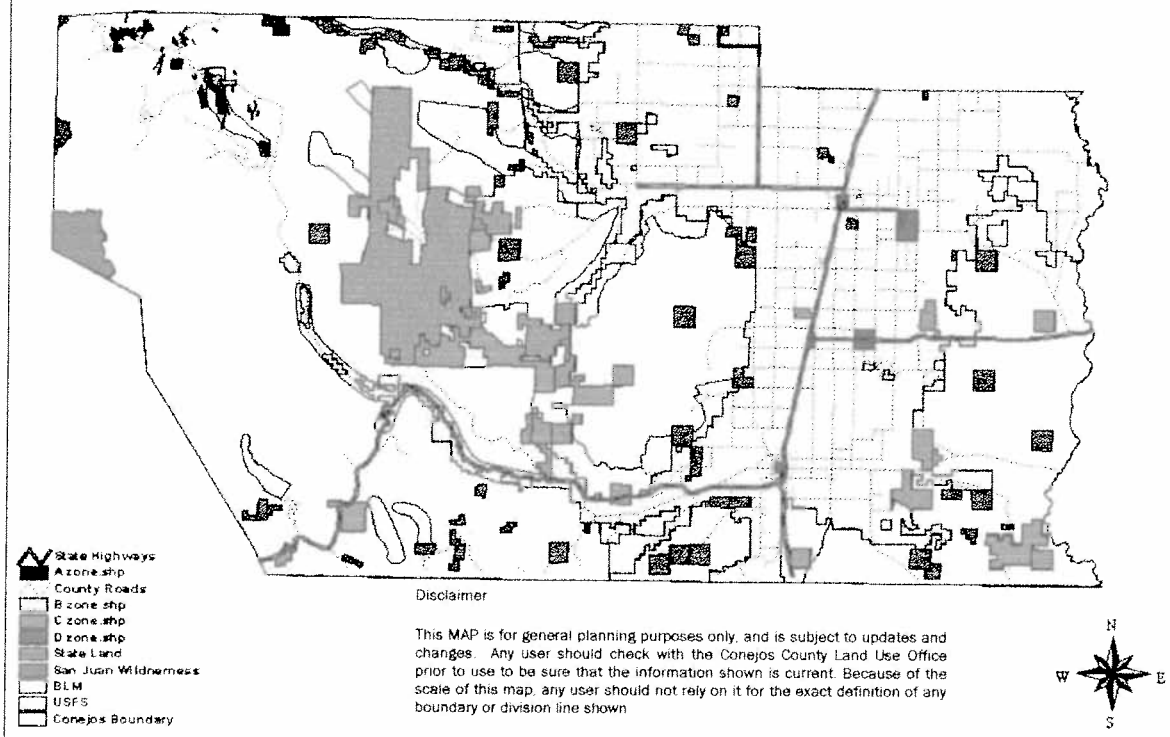

Figure 50 Conejos County Fire Plan Map

Conejos County Hazard Analysis Map
SLV Project Impact 2002
General Hazards

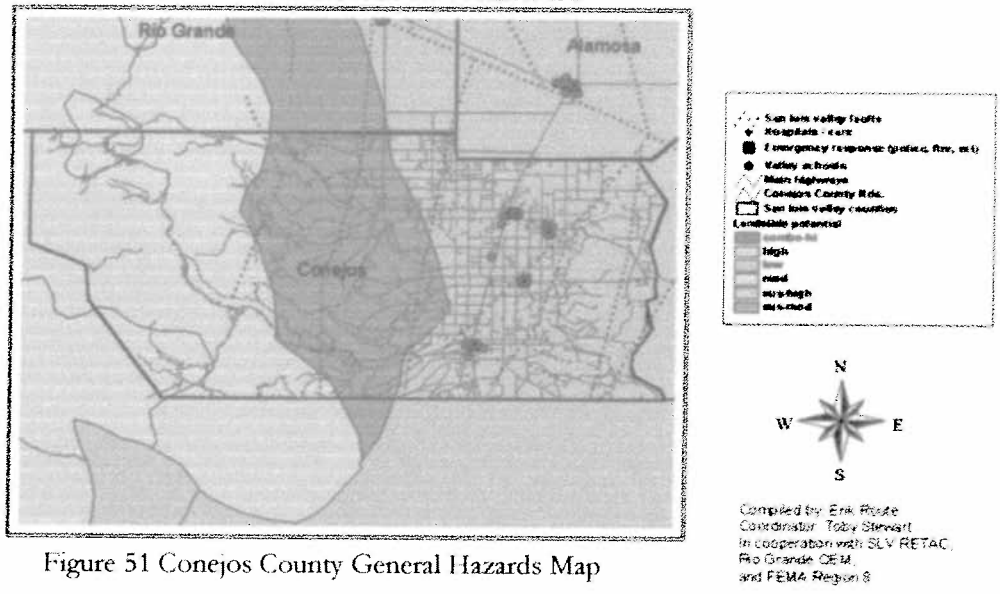

Figure 51 Conejos County General Hazards Map

3.12 Special Places: Archaeological, Cultural and Aesthetic Resources

Conejos County contains a wealth of historic, and archaeological resources, some of which are included on the State and Federal Registers of Historic Places. These Registers are voluntary, incentive-based programs, which may offer tax breaks or grants to help protect the integrity of historic structures and archaeological sites. The Environmental Review checklist will include identification of any mapped or registered sites or structures on or within 1200 feet of the proposed development site, as well as other known landmarks of local interest.

Every effort will be made to maintain the integrity of the identified landmark. In the case of those on State or Federal Registers, the developer will be encouraged to maintain the structure or site in a manner consistent with program guidelines. Wherever possible, landmarks will be considered amenities to the development site. Issues of ownership, access and maintenance will be considered as appropriate for each individual development. In the case of geologic features, the applicant and staff will work together on a site-specific basis to maintain these unique features in recognition of their irreplaceable character and importance to the quality of life in the county.

In the future, Conejos County may wish to develop a local register of historic, and archaeological sites and if warranted, the county may create an overlay Historic District Zone. The Historic District Overlay Zone could be tied to an incentive program to assist landowners in maintaining cultural resources. The county may also wish to consider further identification of other special features of the landscape including unique geologic features and viewscapes. A specific and important feature in this category is ridgelines. The identification process shall include guidelines for protecting the features. The process would require amendments to the Master Plan and the Land Use Code, after appropriate public review.

A number of citizens have expressed a strong interest in protecting ridgelines from development and the Master Plan supports ridgeline protection as a goal. This issue is very complex and involves subjects such as quality of life, private property rights, fairness, and compensation. A detailed citizen process is necessary to move this process forward and fully consider the subjects noted above.

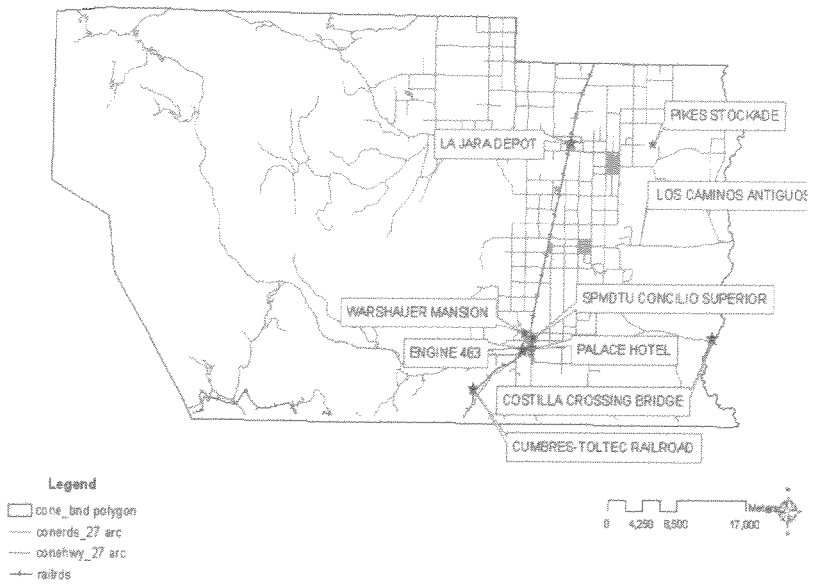

Figure 52 Conejos County Historic & Cultural Resources

3.13 ENVIRONMENTAL CONSTRAINTS

Many of the environmental conditions discussed above pose a constraint to development either in terms of physical constraints such as wetlands, excessive slope, or in terms of environmental resource preservation, such as protection of significant wildlife and endangered species.

Environmental constraints will be classified in composite form on the Environmental Constraints Map. This map will have a series of overlays illustrating the limitations on private land development. Areas of constraint are areas where development is not recommended, either due to extensive mitigation, the presence of environmental hazards, or other factors limiting development activity.

3.13.1 Mapped Constraints

A Geographic Information System utilizing data obtained from The San Luis Valley GIS/GPS Authority and other state agencies has provided the environmental data used in mapping the environmental constraints. Mapped constraints include the following:

- Water Bodies/Hydrological network
- Major Wetlands
- Flood Plains
- Sensitive Wildlife Habitat
- Potential Conservation Areas
- Public Lands
- Historic and Cultural Resources
- Wildfire Hazards
- Geological Hazards
- Soils: Prime Agricultural Lands

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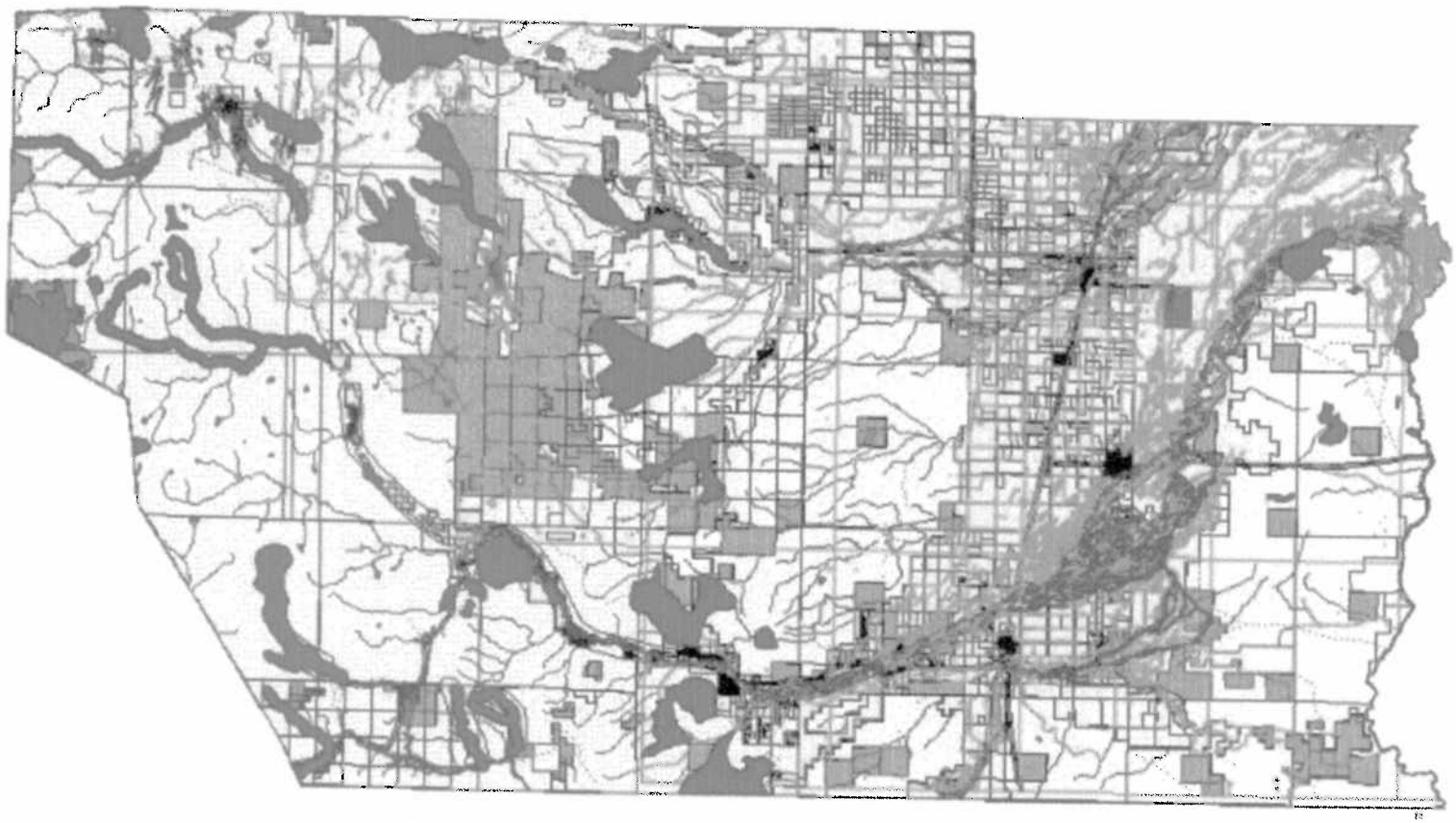

CONEJOS COUNTY LAND USE

MAP 9 Conejos County Mapped Constraints

Concern for protecting environmental resources has been expressed throughout the citizen participation portion of the Conejos County Forums. In the past, county resource protection has been accomplished on a case-by-case basis, as part of the land use permit process. Since the county lacked detailed mapping of sensitive environmental resources, explicit policies, and standards to ensure protection of the resources judged to be most important it has been severely limited

The Conejos County Land Use Office is now responsible for identifying gaps and opportunities in county actions involving environmental issues. As part of its contribution to the master plan, the Land Use Office prepared recommendations concerning protection of natural and cultural resources to be incorporated in the Master Plan and the Land Use Code. The Land Use Office recommended the following six-step strategy for resource protection:

1. Define resources.
2. Inventory resources.
3. Analyze impacts.
4. Define tools for protection and mitigation.
5. Consider cumulative impacts.
6. Monitor the impact of development.

The Land Use Office also identified several categories of resources that the county should identify, conserve and protect because of their importance to the quality of life of Conejos, County. The full recommendation is available in the Land Use Office.

The Master Plan pulls together new and existing information on environmental resources and provides definitions and principles for identifying priorities for protection.

A framework for environmental review is proposed as a strategy to link environmental principles to development design and approval. Principles to aid in the development of explicit performance standards for resource protection and mitigation in the Land Use Code are also included.

3.13.2 Resource Inventory and Environmental Review

Landowners, developers and the County share in the responsibility to protect the environment. To this end, it is important to identify resources and conditions that are potentially impacted by proposed development in the initial stages of the project. This process provides the best resource protection and is also fair to the developer. Early identification of possible adverse impacts helps avoid costly redesign of the project later in the review process. This environmental review will be a formal process, based on standards contained in the Land Use Code, to ensure that the environmental review is fairly and equitably applied to all development projects.

3.13.3 Environmental Checklist

The environmental review will include resources and conditions mapped and/or identified or defined by the county, and for which local, State or Federal standards exist. Other environmental resources and values identified by the Land Use Office and others may become subject to this process in the future. When additional information becomes available the code can be amended. The following resources will be included on an environmental checklist and mapped on the sketch plan as part of the initial development review application. Maps of these resources are available at the County Land Use Office. The type and source of information is described in more detail in the following sections.

Resources for Environmental Checklist:

Rare and Endangered Plants and Animals

Colorado Natural Heritage Program Inventory: Biological Inventory of Rio Grande and Conejos Counties, Colorado

Water Resources, Wetlands

Colorado Natural Heritage Program Inventory: Biological Inventory of Rio Grande and Conejos Counties, Colorado, Volume II

National Wetlands Inventory: Wetland Maps for Conejos County

100-Year Flood Plains

Colorado Water Conservation Board/SLVGIS/GPS GIS Map

Colorado Geological Survey: 1041 Floodplain mapping for Conejos County

Soils

USDA Soil Conservation Service: Soil Survey of Conejos County Area, Colorado

Geologic Hazards and Topography

Colorado Geological Survey: Geological Hazards Avoidance or Mitigation

Colorado Geological Survey: 1041 Geological Hazards Mapping for Conejos County

Wildfire Hazards

Colorado Department of Local Affairs Office of Emergency Management: Colorado State-Wide Fire Hazard Analysis

San Luis Valley GIS/GPS Authority: Conejos County Fire Plan

Cultural Resources and Geologic Features

Colorado Historical Society, Office of Archaeology and Historic Preservation

Important Wildlife Habitat and Corridors

Colorado Division of Wildlife: WRIS Mapping: Composite Map of Significant Wildlife Habitat Conejos County, Colorado.

Commercial Mineral Resources

San Luis Valley Council of Governments: Mineral Resources Inventory for Conejos County.

3.13.4 Cumulative Impacts

In addition to considering the resources existing on a potential development it is important to address cumulative impacts on resources if they exist. One subdivision in an area may have a negligible impact on wildlife habitat. Yet as subdivisions accumulate on nearby parcels, the habitat may become so fragmented that it no longer supports some species.

In general, there are two aspects of cumulative impacts: temporal and spatial. Temporal cumulative impacts are those that accumulate over time. Spatial cumulative impacts, in this context, consider impacts beyond a given development site. In most cases, both types of cumulative impacts are present.

The land use planning process proposed in this plan for future implementation addresses both aspects of cumulative impacts differently. The spatial aspects of cumulative impacts generally require considering an area larger than the individual development parcel. For some resource types (see Section Air Quality) the necessary area is so large that a regional planning approach is needed to assess cumulative impacts. For many resources, however, such as habitat and wetlands, knowledge of the system off-site can lead to better resource protection through site design. The strategy for addressing spatial cumulative impacts has five steps:

1. Continue to improve maps of county resources to better understand the connections between individual ownership parcels.

2. Use resource protection as the primary criterion for designing clustered development to protect resources both on- and off-site.

3. Define management practices for resource protection that consider both on- and off-site impacts.

4. Initiate and participate in regional studies and implementation strategies concerned with resource protection.

5. Where feasible and appropriate, identify specific high-priority resources and long-term plans for managing and protecting them.

To address temporal cumulative impacts the primary strategy is monitoring and evaluating development on the natural and cultural environment. The results over time can be used to adjust standards and management practices to continually improve the protection system. Monitoring must occur in two separate contexts:

1. Examining the status of indicators for natural and cultural resources, as they exist and function in the county. This will insure that new development is constructed and maintained so that it complies with performance standards and conditions of approval designed to protect the resources.

The Land Use Office suggests that "monitoring the status of the natural and cultural environment can best be accomplished through a partnership with government and private organizations and a commitment to perform specific monitoring where data are not available" (see Monitoring and Evaluation).

Designing a meaningful monitoring system will require additional research and input from several fields of expertise. This process should have a high priority, so data can begin to accumulate after adoption of the new Land Use Code. Monitoring the development process for compliance with conditions of approval will require adequate commitments of budget and staffing. One possible source of funding for project monitoring is a dedicated fee collected at the time of final project approval

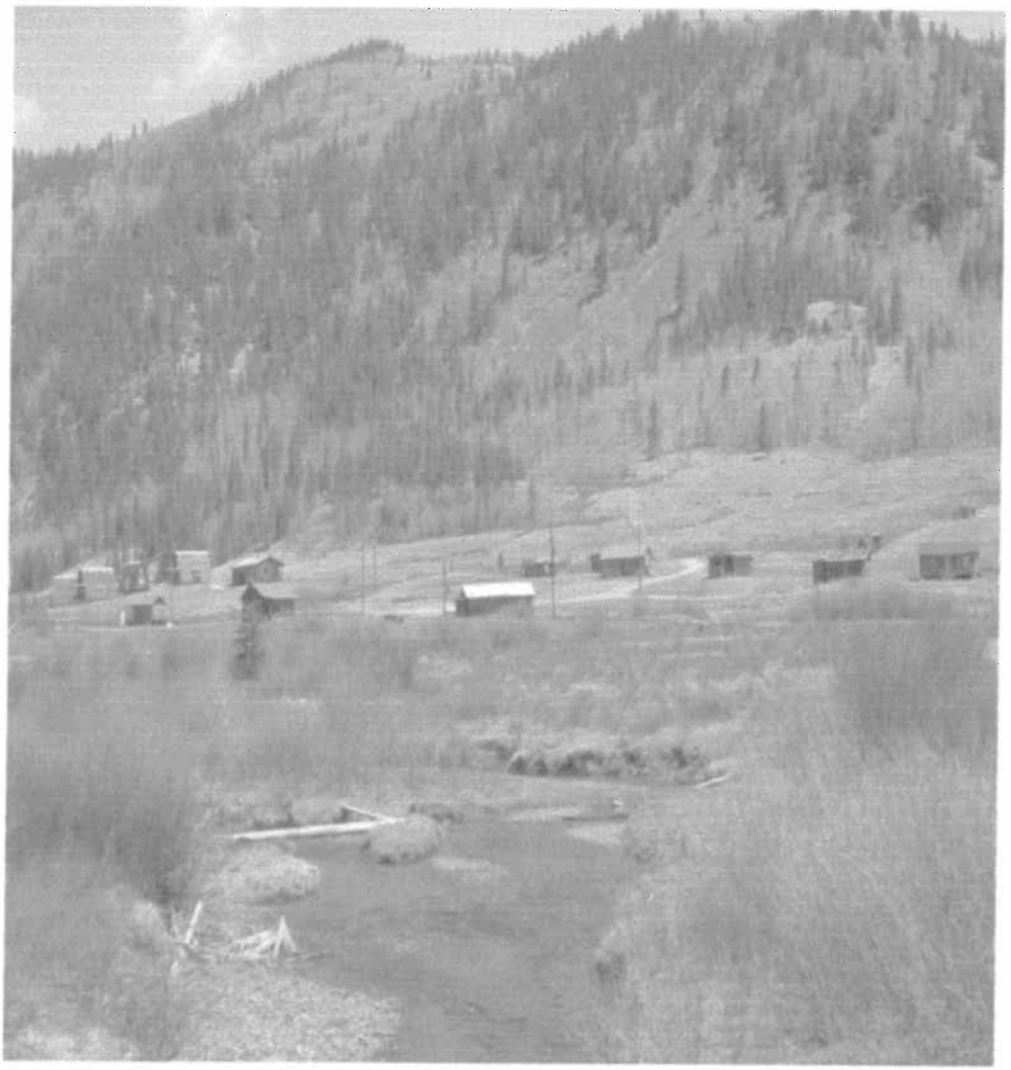

Figure 53 Development at Rocky Mountain Lodge Area

PLAN DIRECTION AND ACTION STRATEGIES FOR ENVIRONMENTAL RESOURCES AND HAZARDS

In the section below, each primary paragraph (in bold type) is a statement of Plan Direction. The subparagraphs are actions or strategies for implementing the Plan Direction.

ENVIRONMENTAL REVIEW PROCESS

ER-1 Resources and environmental conditions potentially impacted by proposed development shall be identified in the initial stages of the project to best design development that protects the environment. The following actions are only recommendations and changes to the land use code cannot be implemented unless the changes are approved by the BOCC.

ER-1-s1 Environmental review shall be a formal required process beginning at the concept stage of all new development projects. Applicants will submit a checklist indicating which environmental resources and conditions will have significant, mitigable, or no significant impact. In addition, resource information available from the Land Use Department, pertaining to the project site and the area at least 1200 feet beyond project boundaries, shall be included on the concept plan submitted with the application.

ER-1-s2 Resources and conditions to be included in the Environmental Review shall be identified in the Land Use Code. Performance standards for these resources shall also be included in the Code. As additional information becomes available new maps, principles, and standards will be developed for the Master Plan and Land Use Code.

ER-2 Monitoring of environmental conditions is a critical part of the environmental protection strategy.

ER-2-s1 A process for identifying and monitoring key environmental factors shall be established to validate the success of environmental performance standards. The results of the monitoring process shall be used as the basis for subsequent amendments to the Master Plan and Land Use Code.

ER-2-s2 Monitoring during the development process is necessary to ensure compliance with performance standards. The Land Use Office will incorporate this function into its proposed work plan and budget. Adequate staffing will benefit both the developer and citizenry by providing a level playing field and consistency of monitoring and enforcement.

Figure 54 Open Pit Mine East of Manassa

MINERAL RESOURCES

ER-3 Conejos County shall protect its commercial mineral resources, pursuant to 34-1-302(1) C.R.S.

ER-3-s1 "Commercial mineral resources" are defined on the Aggregate Resource Maps, pursuant to 34-1-302(1) C.R.S., .

ER-3-s2 Aggregate Resource Areas shall be those underlain by "commercial mineral resources." Aggregate Resource Areas shall not include the following lands:

1)Wetlands identified and mapped as Class III or IV on adopted Wetland Maps, and their required buffer areas.
2) Critical wildlife habitat areas, as identified and adopted in the Master Plan or on a site specific basis.
3) Public open space areas.
4) Areas where existing development effectively precludes extraction or where extraction has been completed.
5) Areas within Growth Management Areas, where existing or previous capital improvement commitments effectively preclude mineral resource development.
6) Areas or parcels remaining after the exclusions contained in 1 through 5 above, where the contiguous surface area underlain by a commercial mineral deposit is 20 acres or less.
7) Any specific site where the mineral extraction of a commercial mineral deposit would not be appropriate in light of the countervailing factors listed in 34-1-304(1), C.R.S.

ER-4 Intensive land uses shall be strongly discouraged in Aggregate Resource Areas, including residential subdivision of land into lots of less than 35 acres.

ER-4-s1 Aggregate Resource Areas may be included in required open space areas for Rural Conservation Development and Rural Land Use Process applications after extraction and reclamation is complete, but extraction activities must be terminated prior to approval of a subdivision request.

ER-5 All applications for an extractive use, whether within a designated Aggregate Resource Area or not, shall be subject to county regulation including Special Review.

ER-5-s1 The requirement for special review shall include sub-surface and open mining for any mineral or earthen material and mining of any mineral by means of in situ leaching, as well as all accessory activities related thereto.

ER-5-s2 Special review for an extractive use will consider both on- and off-site impacts to natural resources, adjacent uses and public facilities.

ER-5-s3 Leaching with cyanide ore-processing reagents in conjunction with open mining for gold or silver shall be prohibited in Conejos County.

ER-5-s4 Gravel Pits shsll be prohibited within one mile (to either side, ie. Buffer zone) from the centerline of the Conejos River, Alamosa, La Jara Creek, and San Antonio Rivers.

ER-6 In cooperation with the Colorado Mined Land Reclamation Board and its staff, the County shall require that all "affected land" as defined by Colorado Statute, be reclaimed whether the mining activity is open or subsurface mining.

ER-6-s1 Within its authority, the county will work with special review applicants to establish appropriate uses and landscapes for reclamation sites. The goal of the reclamation plan shall be to return the site to a use that is a benefit to the community and the landowner.

AIR QUALITY

ER-7 Conejos County shall use cooperative efforts, development standards and incentive programs to protect air quality.

ER-7-s1 Conejos County shall continue to participate in regional air quality and transportation planning efforts and to implement recommendations agreed to by the regional councils.

ER-7-s2 All new development shall comply with local, State and Federal air quality standards. No new development expected to create particulate levels above State standards. Commercial and industrial uses shall meet all applicable permitting requirements prior to final approval of uses.

ER-8 Development proposals shall minimize negative air quality impacts to the maximum extent possible.

ER-8-s1 The Land Use Code shall require applicants to address mitigation of potential air quality impacts for large-scale developments and to implement management practices to reduce or eliminate sources of air emissions. Incentives to encourage use of alternative modes of transportation shall be incorporated into all new development design to the maximum extent possible. The county shall identify design and management practices appropriate for reducing air emissions for large-scale developments.

ER-8-s2 Development applicants shall comply with State requirements for controlling dust emissions during the construction phase of development. The Land Use Code shall reference performance standards for dust control.

Figure 55 Forest Fire Smoke over Conejos, County 2002

WATER QUALITY AND QUANTITY

ER-9 Water quality shall be protected by analyzing potential impacts of development proposals, best management practices to reduce or control sources of contamination, and a demonstration of compliance with local, State, and Federal, requirements.

ER-9-s1 Applicants for new development shall address potential water quality impacts for properties that contain surface water or have the potential to impact surface or groundwater quality. A water quality management plan shall be included as part of the stormwater report in the development review process.

ER-9-s2 Drinking water sources shall be provided the highest achievable levels of environmental protection. Stormwater from new developments must not be discharged into a drinking water supply reservoir unless it can be demonstrated that water quality will not be impaired. Water quality management plans shall address water chemistry, as well as sediment transport and control.

ER-9-s3 Develop a Wellhead Protection Plan to reduce the likelihood of contamination of the county's drinking water supply. A wellhead protection plan would examine the hydrology of the area to delineate a wellhead protection zone, inventory existing and potential contaminants, create management guidelines, develop contingency plans in case of contamination, recommend siting criteria for new wells in case of expansion if necessary, and promote public involvement and education programs

ER-9-s4 Local and State requirements for individual on-site sewage disposal systems shall be considered in the initial stages of the development review process. All new lots to be served with individual septic systems shall be at least 1 acre and shall demonstrate the ability to meet local standards and setbacks prior to preliminary subdivision approval or building permit issusance.

ER-9-s5 Applicants for construction activities, industrial uses and mining activities, which meet thresholds under State law shall demonstrate that they have obtained a Colorado Stormwater Permit. Colorado Stormwater permits require applicants to identify and carry out appropriate best management practices to minimize polluted runoff from their sites.

ER-10 All new development shall be required to adequately provide for stormwater management in a manner which reflects current engineering practice and which takes into account up-to-date hydrologic standards.

ER-10-s1 The Stormwater Management Manual shall form the basis of review of new development. The manual will be updated periodically to reflect the most accurate scientific data possible for defining the relationship between the magnitude and frequency of rainfall events. Requirements for construction of stormwater facilities will be those that provide a cost-effective level of service based on up-to-date scientific data on flood frequencies.

ER-11 Conejos County will explore options to protect and provide adequate water resources for present and future uses in the County, in partnership with other affected interests.

ER-11-s1 Conejos County will not support future transfers of existing water resources out of the county without consideration of the impacts on present and future land uses including agriculture.

ER-11-s2 Water conservation will be an important component of the strategy to maintain adequate water resources.

ER-11-s3 The acequia ditch system shall be maintained in a natural state. Any development that occurs upstream of irrigated lands shall consider measures to prevent adverse impacts on water supply for downstream agricultural operations.

WETLAND PROTECTION

ER-12 Conejos County shall endeavor to protect all identified wetland areas of the county, in recognition of their importance in maintaining water quality, wildlife habitat, flood protection, and other critical environmental functions.

ER-12-s1 Conejos County wetlands shall be defined to include both Clean Water Act (CWA) and U.S. Fish and Wildlife Service (FWS) wetland areas. Wetlands shall include swamps, marshes, bogs, riparian areas, salt flats, vernal pools, and farmed and other disturbed wetland areas, as described in the Wetland Map.

ER-12-s2 The Wetland Map, adopted by reference as part of the Master Plan, shall be the basis for the initial Environmental Review process, which is required for all new development projects. County staff and the landowner will work together on a case-by-case basis to identify and prioritize wetlands that do not appear on the Wetland Map due to scale and size limitations, or in areas not yet inventoried.

ER-12-S3 A Wetland Mitigation Plan shall be developed for any project which impacts a wetland. Requirements and performance standards for the mitigation plan shall address Federal Standards as established by the Army Corps of Engineers and EPA.

Figure 56 Wetlands near Los Sauses

Figure 57 Moose grazing in Field near Romeo

WILDLIFE HABITAT PROTECTION

ER-13 Conejos County shall endeavor to protect all areas identified as highest priority on the Significant Wildlife Habitat Overlay Map, which is adopted by reference as part of the Master Plan.

ER-13-s1 The county will use a wide variety of tools available, including clustering and the Rural Land Use Process, in a manner that is fair to property owners.

ER-13-s2 The Significant Wildlife Habitat Map, available in the Land Use Office, is the basis for the initial Environmental Review process, required for all new development projects.

ER-13-s3 A Wildlife Impact Mitigation Plan shall be completed for any development project which impacts an Important Habitat or which presents concerns of detrimental human-wildlife interaction. Requirements and performance standards for the mitigation plan shall be clearly established in the Land Use Code and shall be the basis for approval of the plan.

ER-13-s4 Riparian vegetation shall be preserved whenever possible through the use of setbacks, clustering or other techniques, in order to preserve wildlife habitat.

ER-13-s5 Update Land Use Code to require a building setback or buffer zone from all stream corridors

HAZARD AREAS

ER-14 Approval of development in hazard areas shall require a finding that the proposed development is compatible with the potential hazards and that future owners or the County shall not be subject to safety hazards or economic costs associated with development related to the natural disturbance.

ER-14-s1 Structures for human use or occupation shall not locate in severe hazard areas. These areas shall be avoided in development plans. Open space areas shall be located where severe hazard areas exist. In addition, restrictions shall be placed on activities that might increase the potential for natural disturbance.

ER-14-s2 Moderate hazard areas shall be avoided wherever possible or the potential disturbance must be adequately mitigated. The Land Use Code shall establish guidelines for mitigation plans and require that the plans be reviewed by professionals having demonstrated expertise in the appropriate field, i.e., geology or wildfire management consultant.

ER-14-s3 Potential disturbances shall be eliminated in constraint areas as part of the development design process. Approval of development in constraint areas shall be conditional, based on adequate mitigation of the potential natural disturbance. Strategies for follow-up monitoring to ensure that mitigation has occurred shall be incorporated when appropriate.

ER-15 New development in wildfire hazard areas shall be designed to create communities less susceptible to loss of life and property from wildfire.

ER-15-s1 All new development in designated wildfire hazard areas shall complete and implement a wildfire mitigation plan specific to that development. Mitigation plan standards and guidelines shall be clearly established in the Conejos County Fire Plan and shall be the basis for plan approval. Standards shall include provisions for emergency equipment access and year-round water supply.

ER-16 Structures in wildfire hazard areas shall be designed to minimize the potential for loss of life and property from wildfire.

ER-16-s1 Building codes shall be modified to include site planning and construction materials appropriate to reduce wildfire hazards. Homes built in wildfire hazard areas shall be designed to include defensible space and fire-resistant construction materials. Standards and guidelines for defensible space and fire-resistant construction materials shall be established in the Conejos County Fire Plan.

ER-17 Limit floodplain development to maintain public safety and protect the integrity of riparian corridors.

ER-17-s1 Development in designated floodplain areas shall be avoided. Where development is unavoidable, all construction shall be designed to prevent damage due to flooding in accordance with FEMA guidelines. In no event shall development in designated floodplains be permitted to raise the flood elevation of downstream property.

NOISE, GLARE AND ODORS

ER-17 Conejos County shall develop noise and glare performance standards and enforce State odor condition standards to protect the health, safety and welfare of County residents.

ER-17-s1 Noise standards from the County Noise Ordinance shall be used in the development review process to ensure that new development does not create unacceptable noise conditions beyond its property boundaries. The Land Use Code shall reference maximum permissible noise levels consistent with the County Noise Ordinance. If the county has reason to believe that a proposed use may cause noise, which would be objectionable or otherwise cause a nuisance, a noise mitigation plan may be required as part of a development application.

ER-17-s2 Performance standards for glare shall be addressed in the development review process to limit off-site impacts associated with glare and light level disturbance. The Land Use Code shall specifically address outdoor lighting standards and provide a review process for outdoor lighting activities and uses such as lighted playing fields and outdoor arenas.

ER-17-S3 State standards for odor conditions shall be referenced to limit odors permissible beyond the property boundaries. Residential and business uses, schools and churches shall be protected from odor conditions of new development. . If the County has reason to believe that a proposed use may cause odors which would be objectionable or otherwise cause a nuisance, an odor mitigation plan may be required as part of a development application.

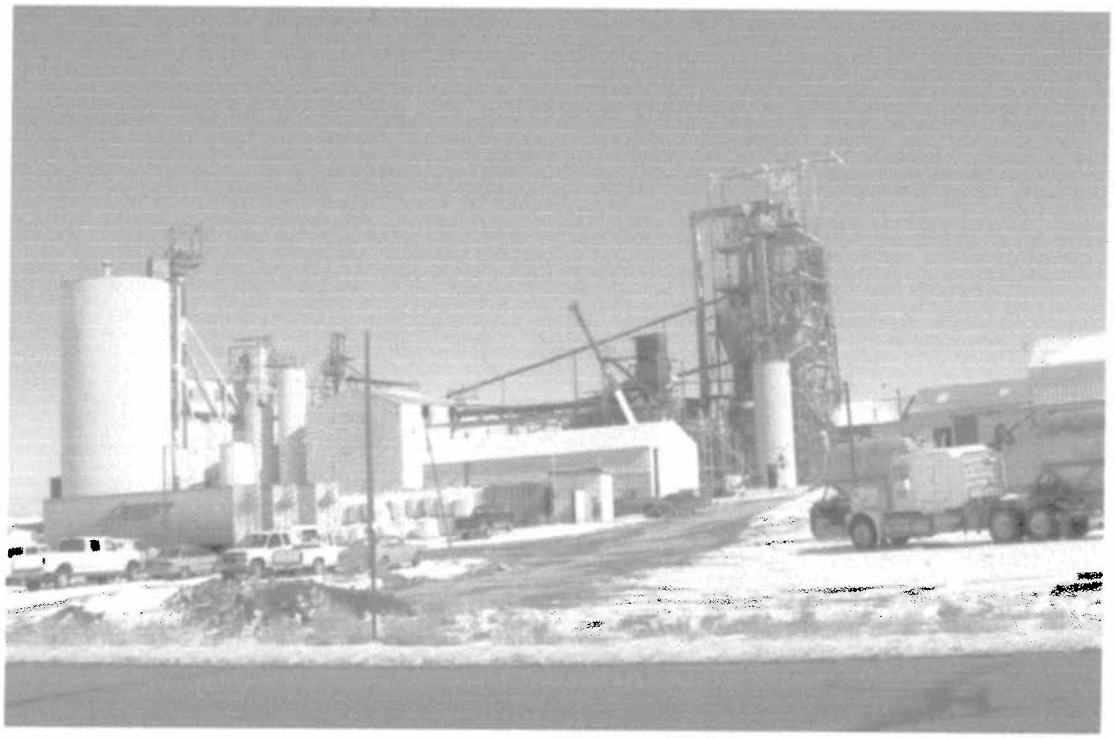

Figure 58 Perlite Processing Plant South of Antonito

SPECIAL PLACES

ER-18 The development review process shall assist in the protection of the special places of Conejos County.

ER-18-s1 Sites and structures listed on State and National Registers of Historic Places shall be included on the environmental checklist at the initial stages of a development project. Other landmarks of local interest shall also be included on the checklist. The development review process shall consider options for preserving and protecting these features and sites.

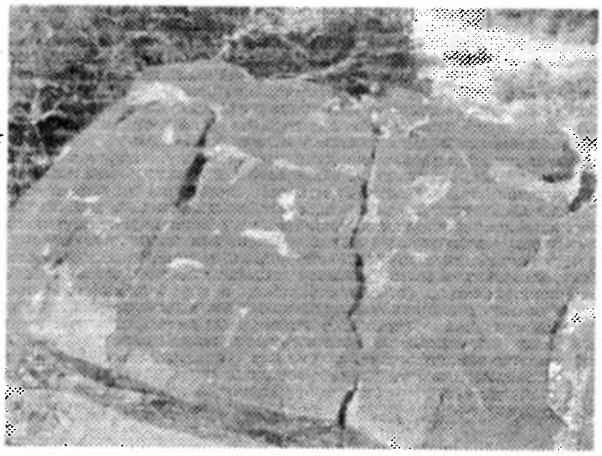

Figure 59 Pictograph near Rio grande

ER-18-s2 Preservation of unique or distinctive natural features shall be considered in the design of the development. As with other resources, open space areas shall be used to protect and preserve the special places of the county.

ER-18-s3 Ridgelines shall be protected from development using a variety of tools which are fair to landowners. The county shall work with landowners on techniques and strategies to address ridgeline protection in a fair manner.

ER-18-s4 All buildings and structures shall be integrated with their natural surroundings. Building placement and height shall be designed to avoid blocking scenic views from public rights-of-way-, historic byways, parks, and other public spaces. All electric utilities shall be placed underground where feasible.

ER-18-s5 Update Land Use Code with design guidelines that screen road cuts, structures, and sign regulations that protect scenic view along roadways in Conejos County.

ER-18-s6 A county wide survey of historic and cultural resources should be initiated in conjunction with the Colorado Historical Society. This survey will serve to identify, catalog, and prioritize historic resources within Conejos County.

ER-18-s7 Incorporate a historic preservation ordinance in the revised zoning regulations and form a certified local government to obtain State Historic Funding.

ER-19 Protect prime agricultural land from development.

ER-19-s1 Annexation and subdivision of productive agricultural land shall be discouraged

ER-19-s2 The practice of agricultural protection techniques such as purchase of development rights, voluntary donation of conservation easements, land trusts, and related mechanisms, which preserve the rural character and agricultural economy of Conejos County shall be encouraged.

ER-19-s3 Enact a right-to-farm ordinance.

ER-19-s4 Create agricultural zoning districts on most productive lands.